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ADDRESS.

CHAIRMAN'S ADDRESS.

Read in the Section on Dental and Oral Surgery at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5-8, 1894.

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CINCINNATI, OHIO.

As chairman of the Section, I received from the Secretary of the ASSOCIATION, a circular of information regarding this meeting. Among other items the circular has the following paragraph copied from the By-Laws of the ASSOCIATION:

"The chairman of each Section shall prepare an address on the recent advancements in the branches belonging to his Section, including suggestions in regard to improvements in methods of work, and present the same to the Section over which he presides, on the first day of the annual meeting. The reading of such addresses not to occupy more than forty minutes."

I will gratify you by complying with the last sentence of the By-Law; the others I endeavor to heed.

As to the progress in dentistry,—some points excepted—the name is almost a synonym for advancement, especially in America. The changes which have been made in the past forty years in dentistry must be familiar to all, and if you will recall these changes you will find they relate more largely to the art than to the science of the profession.

An editorial of the *Cosmos* in the last April number says: "In its scientific phase, the growth of dentistry has not kept pace with its development as an art, probably for the simple reason that manual skill is more easily acquired than scientific culture. The disproportionate growth of the dental art, as manifested in the many delicate and precise methods and manipulations which characterize it, is also no doubt largely attributable to the more material fact that the development and exercise of the art is immediately productive of financial return, while the results of the scientific work are seldom or only remotely convertible into money value. This is particularly the case, when scientific investigation is pursued solely for the purpose of arriving at a knowledge of abstract truth."

It certainly is no discredit that the art has reached so high a state in this country, whether it be from greed of gain, the necessity of bread winning, or the infatuation of invention.

The highest possible attainments in the art of dentistry can not accomplish much without at least some knowledge of the science of the calling. Shakespeare has said: "There was never yet a philosopher that could endure the toothache patiently;" as practitioners of dentistry we all know this to be true. Now is the only relief from this unbearable of maladies, the extraction of the offending organ? To many so-called dentists, I am sorry to say it is. To properly diagnose the cause, and relieve the patient of pain, requires a knowledge of the laws of health and disease; and these are only acquired by study of the facts brought to light, may be by empiricism, but most likely by the untiring labor of men who have given time, thought and labor to the subject, and in which they are truly interested, and this often means the sacrifice of money or health and perhaps both. A few nights or days do not suffice to bring new truths to light, but years of training are required to establish a habit of scientific thinking.

In the article from the *Cosmos* quoted from above, we read further that: "It is not given to all men to be scientific investigators in the broad sense, but it is after all largely a question of degree, for every one is or should be capable of observation, and the ability to correctly interpret and report the result of such observation is simply a question of practice and training."

An eminent physician who came to me as a patient this day, asked the following very pertinent question: "With all the recent advancements in physiology, pathology and painless surgery, why is it that you dentists have not relieved your specialty of the horrors attending the most frequent operations which you are called upon to perform?" The only answer I could give was that we simply lack the scientific advancement. A recent editorial in one of our most prominent medical journals has the following: "The dentists of America are the best in the world, but they are nevertheless away behind the mark. We appreciate their ingenuity, their skill, their drills and dams, their composite fillings, and artificial teeth; they make the best kind of gold crowns, but do not deserve to wear them; this is because they do not sterilize themselves or teach their patients how to prevent caries. They are wonderful patchers up of things half gone, but do not show how to prevent the going.

"There is hardly a dentist (there are a few) who works in an aseptic way, or uses aseptic instruments; some do not know better, some do not think it necessary. But both are wrong; the one class should learn, the other should think. How many dentists can tell surely when they are dealing with a syphilitic mouth? Yet if such a mouth is being treated, we do not believe that any one would like to be the next patient, though the dentist should wash his hands."

A recent decision in the Supreme Court in the State of Missouri, to the effect that dentists are not exempt from jury duty, as are physicians and surgeons, is another index to the public estimate of our position.

It seems to me it is quite a healthy thing for us "to see ourselves as others see us," after this manner; especially if we wish to improve. And right here I should like to ask a question for each to answer to himself, or to another, and that is, How many

really learned men have we in the profession? We all have the title of Doctor. Definition No. 1 given in the Century Dictionary to the word Doctor, is as follows: "A teacher; an instructor; a learned man; one skilled in a learned profession." Let us answer the question, How many of us deserve this title? How many of us are capable of recognizing a scientific truth, when it presents itself to us? A master of science (which title is given as a synonymous term to that of Doctor) need not necessarily be learned in the dead languages, nor a historian of note, nor even a literary man to any great degree, but he must be a thinker, one familiar with established facts in the sciences, and capable of using such facts; of applying them to the principles involved in the work before him. He must be free from doing a thing in a certain way because some one else does so, unless it appeals to his sense of reasoning as tested by established facts.

Now when we have a *large* proportion of such minds in the ranks of our specialty, instead of a very *small* per cent., such a question as asked by my friend, the doctor, would not be pertinent, nor such editorials as quoted from the *New York Medical News* have any point, but as it is now, they cut deeply, because they strike a defective place, and the future of dentistry, if she hold her own, must progress on a broader line of culture. Then we will *not* be "patchers up of things" to any one, and our specialty will be rid of many of its disagreeable and painful features both to patient and operator.

What is required to be an intelligent specialist, is most beautifully set forth in an address recently delivered before the American Academy of Dental Science in Boston, by the Rev. Reuen Thomas, which is of the more value to us because it does *not* come from one of our own specialty; I would advise its perusal to those of you who have not read it. It is to be found in the last January number of the *International Dental Journal*.

We have here some more wholesome ideas for mental digestion. These intelligent outsiders place us where we rightfully belong, without regard to any opinion, either high or low, which we may hold of ourselves. The reverend gentleman says: "By-and-by a volume will be published, I do not doubt, entitled 'Great Dentists,' as we now have volumes on great surgeons, great lawyers, great divines. But the time has not come for such a volume, as the profession is comparatively new. As a writer in the Encyclopedia Britannica puts it: 'For long, dentistry was practiced to a large extent as a superadded means of livelihood by persons engaged in some other pursuits, and without any professional education whatever. The blacksmith, the barber, the watchmaker, and others of the same class were the dentists of every village and country town; while even in some of our large cities, dentists of the same kind were till lately to be found practicing under the very shadow of our universities and public schools.' These words refer primarily to England, but they sufficiently well fit the past condition of things on this side of the ocean, if the speech of men of 70 years and upward is to be taken as reliable."

We do not have to refer to men of 70 for such things, for within six blocks of my own office, in the midst of an enlightened community of half a million of people, can be found to-day in the window of a barber shop a sign which reads: "Teeth extracted; twenty-five cents." As a medical relic of the same character, I will state that within three doors of my office, is an old German barber who adds to his income by cupping and leeching, and other cities are probably not different from this.

We have numbers of charlatans in both dentistry and medicine who are little, if any, above these barbers in proper requirements for their profession. But these people must find some patrons, or they would not persist in their willingness to treat them, and the public certainly demands such people or they would not exist. We need an intelligent public to appreciate intelligent specialists; hence, the necessity of the recent discussion, and the suggestions of plans to "educate the public" which have been made in some of our societies and journals. The general public may need some enlightenment on this point; at the same time the more intelligent part of most communities not only values the profession at its true standard, but it distinguishes between practitioners, and places individuals on the proper round of the ladder; and if we wish a higher estimate we must merit it.

The dental ladder may be high or low, but whatever its height it certainly need be higher than it is. I think it is lengthening rapidly in some directions at least, especially as "patchers up of things." In its subdivisions on medicine the Encyclopedia Britannica gives one paragraph to dentistry which is as follows: "Dentistry or odontology is extremely limited in the range of its subject matter; but it affords great opportunity for refinement of technical skill, and it is given up to a dental branch of the profession."

Now all this goes to show that we are looked upon by thinking people as skilled artisans; and that if we are to be regarded as a learned profession, or a specialty of such a profession, we must be able to bear the test which is daily applied to us as a body; and in order to do this we must know all of dentistry, and a great deal more.

Our reverend brother puts these points very nicely; he says: "A learned man in our day, is a man who knows everything of something, and something of everything. Some of his knowledge must be microscopic, but most of the knowledge must be telescopic; he is minutely acquainted with some one thing, and generally acquainted with many things." Now if a learned man is a man who knows everything about some one thing, a learned dentist should be a dentist who knows everything that is knowable about teeth; but in order to do this he must know something about anatomy and physiology and much else besides. For anatomy and physiology are associated with psychology, and mental philosophy generally. He goes on to show what the tendency is, if the mind is not continually exercised in liberal culture. "The mind," he says, "of a specialist has a tendency to conform to the thing about which it is persistently and continually occupied." . . . "So far as his thinking goes, a man is apt to see everything through the spectacles that have invisibly come over his eyes, from the specialty with which he is persistently occupied."

To a mind at all familiar with the laws of mental philosophy this is a potent fact, and true not only of the profession as a whole, but of the specialists in the profession; the artisan through the particular branch of the art in which he is most interested, and the scientist through his special branch. He farther

says: "While, therefore, we pride ourselves on the wonderful advance we have made in dentistry and surgery and other departments of knowledge, and achievements during the last century, there is a necessity for reminding ourselves of the tendency of our age of specialists, to produce men in large numbers who are illustrations of *learned narrowness;* men whose minds are warped, sectarianized, and materialized; men whose world is a very much smaller matter than it would have been if they had given serious heed to other studies than the bread and butter studies of life. Moreover it ought to correct our tendency to conceit and self-congratulations, when we remember that with all our advances there are some things—yes, many things—which animals and even insects can do better than we can do."

You, no doubt, will say by this time that I take an extremely pessimistic view of the profession, advising you first to give more time in perfecting one's self in the specialty, and then saying that this tends to make us examples of "learned narrowness," and so I do, to a certain degree. I am not pessimistic on the subject, but I do say that our egotism and self-congratulations tend not only to make of us a profession of narrow-minded men, but to very greatly retard our progress.

I am fully alive to the fact that dentistry has reached a most remarkable position for a growth of fifty years, and am justly proud of being a member of such a profession, and for this very reason I am anxious that we fully comprehend our exact position, and the dangers ahead, in order that we may progress the more. "Let him who thinketh he standeth take heed lest he fall," is just as applicable to a body of men or a nation as it is to an individual.

Our advancement has been in much the same way as that of many of the arts. Take, for instance, the manufacturing of shoes or watches or the art of printing, the progress and improvement in these and other arts has been just as great in fifty years as that in dentistry, and the real advance in dentistry is only comparable to these arts; excepting in a few points. Other arts like dentistry have their associations for the interchange of ideas and the improvement of the art.

Within dentistry we have had some scientific truths established; for instance, the discovery of the cause of dental caries.

Again, by the combined experience of thousands of men for the past thirty years, the fact has been established that the system will tolerate a pulpless tooth after the pulp cavity and root canal have been obliterated. Again, atavism, and the etiology of the various deformities of the head, face, jaws and teeth have been scientifically studied by the examination and careful records of thousands of skulls and human subjects. There is also a creditable effort now in progress to establish scientifically the cause and proper treatment of pyorrhea alveolaris.

Aside from these few points, and the intelligent discussion of them, and that of the development of tooth structure, I know of nothing that has taken us beyond the advancements made in several of the mechanical arts.

Let some man or men among us formulate a practical plan whereby dental students can be educated to think scientifically, while they are being educated in the mechanical arts of the profession. Let some one rob dentistry of its horrors, by telling us how to cut sensitive dentine, and insert a permanent stopping without pain; or better, let him give us a practicable prophylactic treatment for dental caries.

Hypnotism may and does accomplish something in the control of pain, but it is not practicable with many operators nor in all cases.

It would seem that the shortest and surest road to these desirable ends is in the proper mental training of the profession. A well balanced mind comes only from broad culture, and not from narrowness of any kind. Sir John Lubbock says: "By concentrating the attention too much on one or two subjects, we defeat our own object." By many, science is considered dry uninteresting work, but this must be only by those who have not tried it or have gotten the wrong conception of it, or a wrong start. I venture the assertion that there are few if any greater enjoyments to the human intellect than the acquisition of new truths. "A cultivated mind," says Mill,—"I do not mean that of a philosopher, but any mind to which the fountains of knowledge have been opened, and which has been taught in any tolerable degree to exercise its faculties—will find sources of inexhaustible interest in all that surrounds it; in the objects of nature, the advancement of art, the imagination of poetry, the incidents of history, the ways and means of mankind, past and present, and their prospects in the future."

This culture may be gotten by constant and persistent effort to comprehend the phenomena and facts by which we are daily surrounded and with which we hourly deal. Lubbock says, again: "The very process of acquiring knowledge is a privilege and a blessing, and if we succeed in gaining the love of learning, the learning itself is sure to follow."

Now when this desire for learning has fastened itself on a majority of our profession, instead of only a very small number, then we will have more scientific discoveries, and merit the name of a learned profession instead of "patchers up of things." Then will we free our patients from pain, and other disagreeable things. Then we can feel with Bacon: "No pleasure is comparable to the standing upon the vantage ground of truth."

Then, too, as the Rev. Reuen Thomas has put it: "The time will be near at hand when a visit to the dentist will have no more terror in it than a visit to the physician who simply feels your pulse, and looks at your tongue, and asks you the usual questions, and then gives you a bottle of sugar-coated pills."

Let us achieve this end, for it can be done, and the avenues leading thereto will prove to be royal throughout.

DISCUSSION.

DR. W. J. YOUNGER, San Francisco—The address of the Chairman is not altogether satisfactory because, it seems to me, it does not give dentists credit for what they have done. Its writer does not seem to appreciate to what plane dentistry has attained. There certainly has been a great deal of scientific work in dental circles during the last few years. As an evidence of this, the fact may be cited that the AMERICAN MEDICAL ASSOCIATION has acknowledged dentistry as equal in merit to the other specialties, and has adopted us as a distinct and recognized part of its organization in the formation of this Section. Dr. Fletcher appears not to understand what dentistry has done. I can very well remember when, forty years ago, the condition was as described in the address; but dentistry has lifted itself up, has gone beyond the carpenter and other artisans. We have, for instance, our colleges in which a scientific basis, at least, is laid for the practice of dentistry.

DR. GILBERT S. DEAN, San Francisco—I do not now care to

discuss the phase of the subject presented by Dr. Younger, but the question of the standing of dentistry should be settled by others rather than by ourselves. There is no question that if we make ourselves a thoroughly scientific body the fact will be recognized. It may take time to accomplish this, but it certainly will come.

DR. L. VAN ORDEN, San Francisco—I feel that we can not gather all there is in the paper from one reading. In one sense, at least, its writer deserves our thanks. As a profession, we are a little given to self-gratulation. If you recall the progress which has been made in the various arts, you can but see what tremendous strides they also have made. I have been accustomed to accept such statements as the paper refers to, regarding the unprecedented advances in dentistry, and I confess that I am somewhat startled at the possibility that what the paper stated as the actual fact might be so. It is very possible that the paper is correct in its estimate. There is no doubt, however, that the dental profession has a purpose of progress; but unless it is pursued in the spirit suggested by Dr. Fletcher, there will not be much real advancement.

DR. EUGENE S. TALBOT, Chicago—It is important that we should recognize the facts as they exist; the more so as the editor of the *Dental Cosmos* has lately taken up the subject of the scientific position of dentistry. This is a subject of great importance to us, and we have to face it. When we call ourselves a profession we do not know what we do. We are not a profession. Most of what we do is mechanical, and we are nearly to the end of our string in that direction. Take the program of any of the meetings of our State dental societies, and compare it with the program of fifteen years ago, and then say how much better that of to-day is than the older one. As an example, take the program of the Illinois State Dental Society at the last meeting. One of the first things is a paper on amalgam, but it is treated purely from the mechanical standpoint. Not any one knows what amalgam is, whether a chemic compound or a mechanical mixture. We know that it will preserve a soft tooth better than gold, but we do not know why. There is hardly a paper a year on dental subjects which has a bit of science in it; very few with anything new in them. A man can not in a week's time, or after he arrives at a convention, write a paper to be read before it that will contain anything new. That takes years of study. Take the subject of filling teeth with gold. There is nothing new in this line in the papers presented. We have had hardly one in twenty years up to the average of those of forty years ago. In order to improve we must get down to hard work along the lines of original investigation. The English, German and French, as Dr. Kirk says, know what science is. We should take up some subject in which we have an interest, a subject with which we are in love, and follow it steadily. The young man, for instance, should select such a subject, after which the first thing for him to do is to read everything that has been written upon it, digest the knowledge thus gained and write the facts, giving due credit to those from whom they were gained. Then, after a while, he is ready to begin to study it. Lest it be objected that this preparation is unnecessary it is proper to ask, Can you take up the microscope successfully without knowing what others have done with it? It takes years to learn what others have done, preparatory to any effective work, and after that it takes other years to learn something new on the particular subject pursued. I believe it is better to write one paper in ten years which gives something really new and valuable, than to write one every year which is only a rehash of what has been said and done by others.

DR. C. S. LANE, Oakland, Cal.—I think that dentists certainly have made creditable advances, and while we may be said to do good patchwork we are something more; are really good tooth doctors. For myself, I am sure that I do more thinking now than formerly, more studying, more doctoring, and I give my patients more instruction in the care of the teeth. The matter of the cleanliness and care of the teeth has received a good deal more attention at the hands of the dentists during the last ten years than previously. We look into cases more carefully than we did, and we save roots, when the crowns can not be preserved, better than we did; we apply medicaments that overcome adverse conditions better than we did. We are saving teeth and roots which were sacrificed then. We ought to be proud of the vigorous growth of our profession; of our progress in inducing great cleanliness. In combating the diseases we are called upon to treat, we are fully as successful as other specialists. A good practice, and one which I am accustomed to pursue is to give patients a little clinic at the chair every time they are in it, and I find that I have to tell them over and over again that all our efforts are useless unless they attend carefully to cleanliness.

DR. YOUNGER—When we look through a window and find a prominent fly-speck upon it, it interferes with our enjoyment of the view presented. So when we put a young man through a course of study and grant him a diploma and then say his work is only on a par with that of a carpenter, it is like a fly-speck on the window. Otherwise, I agree with Dr. Fletcher, and thank him for his paper.

ORIGINAL ARTICLES.

FIFTY CONSECUTIVE INTRA-PERITONEAL OPERATIONS—ONE DEATH.

BY A. H. CORDIER, M.D.
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Any surgery that involves the handling of, and injury to life-essential organs, must of necessity require more care, judgment and skill than that in localities of less import to healthy and comfortable existence. Of all surgery that of the abdomen and pelvis entails the greatest risk to the life of the patient, hence the birth and existence of abdominal and pelvic surgery as a specialty. That it should be so separated from general surgery is amply proven by the comparative results of the specialist and the general surgeon. This paper is not intended to condemn the work of the general surgeon, neither is it my desire to laud the results of the work of the specialist, only in so far as it is necessary to show that a concentration of one's thoughts and education along a special line must of necessity beget more accurate deductions, and uniformly better results. It is not only necessary that the abdominal surgeon be able to quickly recognize any unlooked-for complications, but equally deft must he be in quickly devising and applying the best method to meet the indications in the case.

In reporting fifty intra-abdominal and pelvic operations with only one death, I anticipate that a selection of cases and a failure to report all deaths will be brought forward by some one. Many of these cases have been operated on in localities where the surroundings were not the best to conduce to a low mortality, yet by the free use of pure boiled water and soap, cleanliness and complete work, I have been enabled to maintain this low mortality. My cases have not been selected, only in so far as my past experience directed me was best for the future of my patient, *i. e.*, no hopelessly malignant cases have been operated on, save one case, at the earnest solicitation of friends and of the patient. An exploratory (?) incision was resorted to, to confirm my unfavorable prognosis, to *their* satisfaction. This case is tabulated because I desire to lay stress on the fact that to me it was not an exploratory incision, (my diagnosis was made prior to the incision) and incidentally to call attention to the fact that too many diagnoses are made only after the abdomen is opened. It does not show a profundity of knowledge to hear an operator and teacher say to his class: "I have here an abdomen, and in the abdomen a tumor. Whether it is from the uterus or the liver it matters not," etc. No opinion is worse judgment than a wrong diagnosis.

Most of my work is done in hospitals where trained abdominal nurses can be in constant attendance, and where my visits may be as frequent as possible. It is far easier to prevent a peritonitis than

to cure it after it has once gained a stronghold. My only death in the series was in a private residence, but it was not due to the surroundings so much as to the condition of my patient at the time of the operation. It requires more time and care on the part of the operator in making and maintaining favorable surroundings in a private residence than in a hospital. I have endeavored to have a trained nurse with all my cases in private houses, yet in some instances the family physician and myself have assumed the whole responsibility. The best results are obtained in hospitals.

The patients have been secluded as much as possible from the meddlesome presence of friends and relatives for several days following the operation.

My patients have in all cases, except the emergency cases, had from three days to a week of preparatory treatment, consisting of dieting, purging with salines, douches, enemas, baths, and as a routine, tr. nux vomica in 15 drop doses, three times a day. I do not starve my patients before the operation, but a period of fasting begins on the morning of the day set for the operation. This is kept up for forty-eight hours, or longer, if symptoms of a peritonitis develop, or nausea from the anesthetic persists. If necessary, a nutritious rectal enema is given each four or six hours. This method of nourishing the patient will relieve the vomiting often, and at the same time relieve the intense thirst.

I withhold liquids from the stomach for at least twenty-four hours. This starves the tissues for water, causes the peritoneum to drink up any fluids in its cavity, and thereby diminishes the culture fluid for the growth and multiplication of any microorganisms that may have gained entrance during the operation, from outside sources or by any unavoidable accident liberated during the breaking of a septic cavity during its enucleation. I have avoided raising the temperature of the operating room above a comfortable warmth, (70 to 80 degrees F.) believing as I do that a patient may become much exhausted from a protracted sweat inaugurated in a superheated operating room. I have operated, when possible, in the forenoon. This gives the operator several hours of daylight to see his patient after the operation is completed, and the patient goes on the table soon after a night's rest, and not too long after the beginning of the fasting period. I get along with as few assistants as possible, one usually being all that is necessary to wash and handle the sponges, and assist in the handling of hemostats. No one but myself and this assistant is permitted to touch an article or instrument that is being used in the operation.

I make all my preparations for operation, such as scrubbing the instruments, washing the bowls, etc., and I use my own instrument trays. I have used no antiseptics in my work, but have relied upon thorough cleanliness and pure, boiled, filtered water. I am a firm believer in the bacterial origin of septic processes, but believe that these microörganisms can not exist in dangerous numbers where thorough cleanliness is obtained, and boiled, filtered water freely used.

Visitors at an operation are asked to refrain from talking, and to maintain their positions. This prevents any confusion on the part of the operator from remarks made by onlookers, and causes less dust and other floating particles to be moved about the room and into the field of operation.

In this series I have not used a sponge. The flat gauge pads have been used in each case. They are easily made pure by boiling at the same time with the instruments. I prefer the regular sponge, but too much care and time are required in their preparation. I have used only the purest and strongest Chinese twist for my pedicle ligatures, using the smallest possible strand compatible with safety. In none of my cases have I had cause to regret the use of silk ligatures. In my intestinal sutures and work, the same material has been used. I boil, at each operation, only the amount I anticipate that I will need. A second boiling weakens the silk. Any left over is thrown away. I use silkworm gut sutures for the parietal incision. The same precaution is used here as that observed in the preparation of the silk ligatures. I use very few instruments in my abdominal work. They are always boiled just before using.

Ether has been the anesthetic in most instances, and has not produced any more unpleasant after effects than chloroform. I endeavor to have the anesthesia as short as possible, by having every preparation for the operation completed before the anesthesia is begun.

The abdominal incision is made in the median line, and is as short as is compatible with easy manipulation. A short peritoneal incision minimizes the risk of septic material entering, prevents escape and consequent handling of bowel, and reduces the number of post-operative hernia.

Many of these cases have been pus cases (ovarian abscesses, appendicitis, etc.,) and have required the free use of irrigating fluid—pure, boiled, filtered water. I have used in my irrigations from two to eight gallons of water. In every case where it has been necessary to use irrigation there I have also introduced a drainage tube. The more I use the tube the more am I convinced that it is a life saving device. I never regretted having used the tube, but have had occasions to lament its absence. Even though the doubtful drainage case recovers, the convalescence will be more tardy and less comfortable than if the tube had been used. The vomiting has been more persistent, the bowel less responsive to salines and injections, and the gas pains of greater intensity. If I had to abandon the use of the drainage tube in abdominal surgery, I am sure that the mortality would be increased very much. There is a wrong way and a right way of using and caring for the drainage tube. Those using it correctly will continue to use it. Others will abandon it, and hunt for something new to try.

The after care of my cases has been one of vigilance, that any untoward symptoms might be quickly discovered and early remedied. It is easier to prevent or avert life destroying post-operative complications than it is to cure them when once fully established. It is impossible to give definite rules as to when food and drink should be given these cases. Each case is an individual, and should be treated as such. The judgment and experience of the operator must dictate in each case what course to pursue. It is safe to say that the less fluids and nourishment the patient gets for forty-eight hours, the better will he or she be for this abstinence.

I will endeavor to give a brief summary of the pathology and manner of dealing with individual cases.

The two cases of cholelithiasis presented histories of cystic obstruction, accompanied by the usual recurring painful exacerbations and corresponding interval of comparative ease and comfort. The stones were from the size of a millet seed to that of a filbert, one case having five, and the other some forty odd stones.

The operations were completed at one setting, stitching the gall bladder into the parietal incision, as recommended and practiced by Tait and Price. A rubber drainage tube introduced into the viscus was allowed to remain from two days, in one case, to a week or over in the other. Both continued to discharge more or less bile for several weeks, but ultimately closed, and have remained closed.

My patient on whom I performed the intestinal anastomosis was in a most desperate condition at the time of the operation. No bowel movement for fourteen days, vomiting feces, and in collapse at time of operation. Obstruction due to band across a coil of the ileum, distended gut ruptured above the stricture, feces in peritoneum at time of operation. Lateral anastomosis with the Murphy button. This patient carried the button for one hundred and six days. He has remained perfectly well.

The six ovariotomies were on patients from 22 to 56 years of age, the growths being from the size of a goose egg to that of a good-sized coal hod. Some of the cases were firmly attached to all structures with which they were in contact. Others were very simple, easy operations. Drainage was used where there existed many adhesions, as a precaution against hemorrhage, or part of the contents of the cyst were spilled into the peritoneum during the operation. In two of the cases both ovaries were removed because of evidence of early cystic development.

	No. of cases.	Males.	Females.	Died.	Recovered.	Drainage.	Both sides removed.	One side removed.	Metrostaxis.	Ether.	Chloroform.	Remarks.
Cholecystotomy	2	1	1		2	2					2	
Intestinal anastomosis	1	1			1	1					1	Lateral by aid of Murphy button.
Ovariotomy	6		6		6	2	2	4	3	6		
Extra-uterine pregnancy	5		5	1	4	5	2	3	3	5		All with tubal rupture.
Tait's operation	3		3		3	0	3			3	3	
Cirrhotic ovaries	2		2		2	0	2			2	2	
Suppurating Fallopian tubes and ovaries	9		9		9	7	9			8	9	
Abdominal hysterectomy	4		4		4	0					4	
Vaginal hysterectomy	6		6		6	6	5				6	
Ventral fixation of uterus	4		4		4			1	1	1	4	
Appendicitis	5	2	3		5	3					3	2
Abdominal nephrorrhaphy	1		1		1	0						1
Stabbed wound of abdomen	1	1			1	0						1
Exploratory operation (so-called)	1		1		1	0					1	Malignant uterus and omentum.
	50	5	45	1	49	26	24	9	20	46	4	

In five cases of undoubted extra-uterine pregnancy, tubal rupture had taken place in every case before the eleventh week. In one at the end of six weeks. In one case a peritonitis had developed after the rupture, and the case was being treated for typhoid fever. I found in that case universal adhesion of inflammatory mass and placenta, making one of the most desperate cases in the list, yet by complete work, irrigation and drainage, her recovery was complete. The other cases presented nothing of unusual interest, save the one death in my tabulation. This young married woman, while shopping, became faint and was taken home in a carriage. A physician was called, and as her general symptoms were those of an early miscarriage, she was so treated for five days. I saw her at this time, and advised an operation. She was bloodless and septic. Operation revealed abdomen full of blood, and a large abscess on one side of the uterus. This was unavoidably ruptured in its removal. Irrigation and drainage failed to save her, as she had a progressive sepsis (true septicemia) at time of operation. Very early surgery would have saved this case also. The tubal rupture had set free more septic material than her weakened and anemic resistance could withstand.

The Tait operations (the removal of healthy appendages) to check the hemorrhage and growth of multinodular uterine fibroids, have been very satisfactory so far. These operations, while usually very simple and easy of performance, are occasionally most difficult to perform, owing to the difficulty in getting the adnexa up into the abdominal incision while ligating. Such was one of my cases. Two easy cases of removal of cirrhotic ovaries for pain *antedating several days the menstrual flow*, are included in my tabulation. In both the cases a varicosed state of the Pampiniform plexus was noticed. In both the cases the pains have been relieved, and the results are all that could be desired. This comparatively rare pathologic condition, from its importance, demands more attention from the pathologist and surgeon, even though it be admitted that it is only the result of a chronic interstitial ovaritis, simple or infectious. (Smallpox, etc.)

Four abdominal hysterectomies have been for the removal of non-malignant neoplasms of the uterus. The pedicle has, in each case, been anchored in the lower angle of the incision, the Koeberle sœur-nœud, and wire being used in all. The pedicles have come away within fifteen days, and there have been no fistulæ or herniæ in a single case.

The six vaginal hysterectomies have been performed for malignant disease of cervix in four cases, and for procidentiæ with suppurating appendages in two. The clamp has been used in each case. No hemorrhage and no untoward results have accompanied the use of the clamps, or followed their removal. The malignant cases have not been far advanced, thus insuring the least risk of recurrence.

Hysteropexy is an operation that, in my experience, is of inestimable value, but we must not lose sight of the fact that, in the majority of these cases, the operation that fixes the uterus to the parietes also breaks up many retro-uterine adhesions, thus liberating other sound imprisoned organs as well as the uterus.

I have used silkworm gut sutures through all the structures, including with the sutures an inch or less of the uterine fundus.

Two of the cases of appendicitis were operations done during the primary attack. Two had had a number of severe spells. The other was a recurring case, with a large walled in abscess. In this case the appendix was found lying loose in the abscess cavity, having sloughed. This case was drained, as were the two cases with recurring histories.

The stabbed wound case demanded an operation to stop bleeding from divided mesenteric vessels, and to remove and clean a portion of the omentum that was protruding and infected.

The so-called exploratory incision was to confirm my diagnosis of malignancy, to others interested in the case.

Suppurating and diseased Fallopian tubes and ovaries make up 20 per cent. of all cases. Gonorrhea and abortions have held first and second places as etiologic factors in the suppurative diseases of the adnexa. In every case both tubes have been found diseased beyond repair, and have been removed. The amount of pus found has varied from a few drops in sealed and strictured tubes to a pint in a large abscess, the walls of which were made up of the remains of the cheesy ovary and its coverings.

Irrigation drainage were practiced in 80 per cent. of these cases, and while the per cent. of recoveries was 100, the two in which no drainage was used would have had a nicer and quicker convalescence had I used drainage. The tube remained in from three to ten days.

ELECTROLYSIS AS A TREATMENT FOR DEVIATIONS, SPURS AND RIDGES OF THE NASAL SEPTUM.

BY WILLIAM L. BALLENGER, M.D.
CHICAGO.

Having seen no contribution from an American observer on the electrolytic destruction of deviations, spurs and ridges of the nasal septum, I offer a report of three cases selected from my private practice.

Mermod, of Switzerland, reported in 1887 excellent results in two cases of chronic rhinitis treated by electrolysis. He limited the application to the mucous membrane. To Dr. Miot, of Paris, however, belongs the honor of recommending electrolysis for the destruction of septal spurs and deviations. In the wake of Dr. Miot, Dr. Garel, of Lyons, reported thirty cases of septal thickening treated by the monopolar method, with success. Drs. Moure and Bergouié still later improved the operative technique of the bipolar method. They claim superior results for their method, and I will briefly outline it here:

Each needle is insolated, except so much of the point as is needed to penetrate the bony growth. The needle connected with the negative pole of the battery is introduced into the spur (or other thickening) in a line with the axis of the nasal fossa, parallel with the septum. The one connected with the positive pole is placed over or above the negative. An important point made by Drs. Moure and Bergouié is not to put the needle too near the base of the deviation, in order to avoid perforation of the septum. The amount of current should vary from eighteen to twenty-five milliampères, according to the volume and density of the growth, and should last from twelve to fifteen minutes. If all conditions are well arranged, a spur or deviation can be removed at a single sitting. Other references might be given.

I do not wish to be understood as advocating electrolysis to the exclusion of other methods. The drill, saw, chisel, galvano-cautery, bistoury, forceps and punches are all useful, indeed indispensable methods of treatment, and electrolysis is also a good method. The judgment of the operator must be exercised in determining the method or methods to be employed in each case individually.

The cases reported below were treated by the monopolar method, with the success narrated with each case. I have never used the bipolar method, but shall do so in the near future, believing it to be an improvement over the monopolar electrolysis of spurs and deviations of the septum.

Case 1.—Mrs. T., aged 46, consulted me for a painful, dry condition of the pharynx. Upon inspection I found the mucous membrane of the pharynx almost dry, but glazed over with a film of thick pasty mucus. The pain and discomfort were always increased by exertion or emotion of any kind. She had been conscious of the trouble for sixteen years. A large cartilaginous spur projected from the anterior inferior portion of the right side of septum. One of almost equal size was on the left side. Marked hypertrophy of membrane over the middle and inferior turbinateds on the left side. Some hypertrophy also existed on the right side, but not nearly so much. I do not intend to review the treatment, except so far as it relates to the destruction of the spurs. On July 2 the spur on the left side was removed with a drill propelled by an electro-motor surgical engine. The hemorrhage, while not so profuse as that attending the operation with the saw, was much more profuse than that attending the operation of electrolysis. On July 15 the spur on the right side was removed by electrolysis, the monopolar method. The membrane over the spur was first cocainized with a 10 per cent. solution of hydrochlorate of cocain applied by laying a pledget of cotton saturated with the solution over the spur. At the end of five minutes the cotton was removed and a gold-plated electrolytic needle was introduced through the spur near its base. This needle was connected with the negative pole of the battery. The patient held the positive pole (a small sponge electrode) in her hand. The galvanic current was gradually turned on until eighteen milliampères of current was passing through the spur. I maintained a close observance of the membrane on the opposite side of the septum, to see if there were bubbles of gas, indicating that the electrolytic effect was penetrating too deep. At the end of fifteen minutes the current was gradually turned off. Three months after the operation by electrolysis, I made an observation and there was no trace of the spur except a smooth base covered by a normal membrane. The wound left after the operation with the drill did not heal so kindly, still a satisfactory result was obtained.

Case 2.—Mr. John M. P., English, aged 28. Without giving a general description of the case I will refer at once to the condition of the septum. There was marked deviation of the septum to the right side, causing partial stenosis. The crest of the deviation was much thickened. The needle was carefully introduced into the bony accretion along the line of the crest, the current being applied as in Case 1. At the end of twenty minutes the needle was removed. The result was not entirely satisfactory, only a portion of the crest being destroyed. One week later the treatment was repeated with complete success.

Case 3.—Mr. W. T. H., age 25. On the right side of septum, extending horizontally a distance of one inch, was a bony ridge causing serious stenosis. The needle was introduced the entire length of the ridge and the current applied as in Case 1. At the end of ten minutes the patient became faint and the current was turned off. The patient was changed from a sitting to a reclining posture and the treatment continued for fifteen minutes, making a total of twenty-five minutes. Upon slight pressure the ridge collapsed, and one month after the operation the septum showed slight evidence of the former existence of the ridge.

No sloughing or other ill effect followed the treatment in either of the cases.

31 Washington Street.

SERIOUS ABDOMINAL CONTUSIONS: SUMMARY AND CONCLUSIONS.

Read at the Annual Meeting of the New York State Medical Association, Oct. 11, 1894.

BY THOMAS H. MANLEY, M.D.
NEW YORK.

1. The abdominal cavity, through its exposed position, is not infrequently the seat of serious injury.

2. Posteriorly, superiorly and laterally it is powerfully supported by the osseous walls of the vertebral

column, the spine and *ossa iliarum;* besides, it derives the powerful auxiliary support of its muscular walls.

3. The abdomen, because of the physical position and function of its anatomic structures is better able to sustain and resist either concussive, percussive or compressive violence than either the cranium or thorax; and hence, of the great cavities, most often escapes the consequences of serious trauma.

4. The gaseous elements which predominate in volume, impart a buoyancy and tympanitic quality to the abdomen, well calculated to neutralize and diffuse the impact of concentrated force.

5. Experimentation on the lower animals and clinical observation with autopsies quite conclusively demonstrate that percussive force, *per se*, is never a cause of vascular or intestinal rupture; but rather that it is caused by the damaged structure or organ being engaged, by the crushing force from before, and the bodies of the vertebral column behind; the promontory of the sacrum, the sharp edge of the superior straight, or the lateral wings of the ilia.

6. The qualities of force commonly sustained by the abdomen, in the order of gravity and frequency, are compressive, percussive and concussive.

7. The symptomatology of abdominal non-penetrating traumatisms is extremely vague and indefinite. As a general rule, even in the most serious cases of internal organic injury, the integuments at the seat of injury, bear no trace of damage.

8. This class of injuries jeopardizes life through: *a*, hemorrhage from the mesentery, the great blood trunks, or the solid viscera.

b, through septic peritonitis, consecutive to rupture of the intestine, the stomach, gall or urinary bladder, the gall duct, or ureters.

c, through shock, from great violence suddenly applied over the solar or cardiac plexus, though death from this source, without internal tangible lesion, is so rare as to throw a doubt on its possible existence.

9. Sudden and extreme collapse, with well-marked signs of exsanguination, point to free internal hemorrhage; while emesis, intense agonizing pain and tympanitis are quite certain indications of intestinal or vesical rupture.

10. Simple traumatic peritonitis almost invariably succeeds all severe abdominal bruises; the septic, only when there is leakage from the intestinal tract, the gall or urinary bladder. The former type usually running a benign course, and the latter, fatal only in the presence of complications; or when the extent of intestinal perforation is considerable.

11. The treatment of grave abdominal crushes is tentative and radical. The former in all cases attended with great collapse, and others in which we are assured there is no intestinal rupture. Rest and opium must constitute our sheet anchor, with such topical applications as secure the most comfort. Surgical intervention in the way of exploratory incisions into the abdomen is to be resorted to only when symptoms of intestinal rupture are supported by unequivocal symptoms, and all hope of saving life by other measures is lost. Nor shall we operate while our patient is in deep shock. But, nevertheless, desperate and extreme, as this resort must always be regarded, in certain cases it offers the only prospect of saving life. Laparotomy, as a process of effecting hemostasis in hemorrhage following non-penetrating abdominal injuries, should not be permitted.

12. Inasmuch as bruises of the bowel may undergo sloughing, and cause a consecutive perforation at a distant date it is important, in all severe cases, that the bowel be kept quiescent by a restricted fluid alimentation per rectum; and the body be kept at rest until such adhesive inflammation forms as will effectively seal up threatened breaches.

13. Although there can be no question but serious injury to the organs in these cases often leaves diminished function there is no proof, as far as can be gathered from my own experience, or that of other observers, that hernia is directly induced by contusions of the abdomen.

STIGMATA OF DEGENERACY IN THE ARISTOCRACY AND REGICIDES.

Read in the Section on Neurology and Medical Jurisprudence, at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5-8, 1894.

BY EUGENE S. TALBOT, M.D., D.D.S.
FELLOW OF THE CHICAGO ACADEMY OF MEDICINE.

A false hypothesis betrays its untruth the further it is traced. If, therefore, the hypothesis of the dental stigmata of degeneracy be untrue, the further this is followed its erroneous nature becomes the more demonstrable. If these stigmata are of value, their existence is the more demonstrable under "the fierce light which beats upon the throne."[1]

While degeneracy in kings is, as Dr. Ray remarks, medically no more important than degeneracy in peasants, still sociologically it is far more serious. While there are data denoting the existence of dental and oral stigmata in the Cæsars, the most important illustrative evidence is found in that Portuguese family which has for several centuries richly supplied the thrones and aristocracies of Europe with degenerates. The mother of Pedro I., of Portugal, was the first in whom this degeneracy is decidedly demonstrable. In her, it is, however, the outcome of more than one generation. Pedro the Cruel had irregular epileptic attacks and bad periods of stupidity and inventive malignancy, so often characteristic of epileptics. His son, Fernando I., was an imbecile with prognathous lower jaw and receding forehead. He died without issue. His bastard brother John I., succeeded him. Mentally he much resembled Pedro. From John's marriage with Philippa, daughter of John of Gaunt, came a daughter, Isabella, the mother of Charles the Bold (more properly the Rash) of Burgundy. In Charles the Bold, the jaw defects were noticed, with considerable inventive stupidity and one-sided genius, in marked contrast with the level-headed ability of his father, Philip the Good of Burgundy. Mary, the daughter of Charles the Bold, inherited his jaw, and bequeathed it to her son, the Archduke Philip.

The granddaughter of Pedro the Cruel married the grandson of the bastard brother who succeeded Pedro on the throne; from this union came John II., of Castile; he married Isabella of Portugal, the mother of Queen Isabella of Columbus fame, whose union with Ferdinand founded the Spanish monarchy. Isabella of Portugal become demonstrably insane and so remained for several years until her death. The children of Ferdinand died early with the exception of Joanna who became the wife of the Archduke

[1] A good account of the insanity running through the royal families of Spain may be found in "Ireland's Blot on the Brain." Personal examination of living descendants of the royal families of Spain reveals pronounced stigmata of degeneracy.

Philip. The son of this pair, Charles V., was melancholy, epileptic and spasmodically religious. He had defective teeth; his lower jaw was longer than the upper, which disparity interfered with mastication and made his utterance indistinct. The brother of Charles V. founded the German house of Austria; Maximilian (his son) married Mary, daughter of Charles V. From this taint has proceeded the neurosis still evident in the Austrian and Bavarian royalties. The son of Charles V., Don Carlos, had an imbecile genius, of an asymmetrical frame and with an exaggeration of the jaw deformity of his father; Philip II. had no children by Mary Tudor; his second wife bore him two daughters who introduced fresh taint into the houses of Savoy and Austria. His third wife was his niece, daughter of Maximilian by Mary, Philip's sister. Of the end of this line Macaulay gives the following vivid picture:

"The Prince upon whom so much depended, was the most miserable of human beings. In old times he would have been exposed as soon as he came into the world; and to expose him would have been a kindness. From his birth a blight was on his body and on his mind. With difficulty his almost imperceptible spark of life had been screened and fanned into a live and flickering flame. His childhood, except when he could be rocked and sung into a sickly sleep, was one long piteous wail. Till he was 10 years old his days were passed on the laps of women and he was never once suffered to stand on his rickety legs. None of those tawny little urchins clad in rags stolen from scarecrows, whom Murillo loved to paint, begging or rolling in the sand, owed less to education than this despotic ruler of thirty million subjects. The most important events in the history of his own kingdom, the very names of provinces and cities, which were among his most valuable possessions, were unknown to him. It may as well be doubted whether he was aware that Sicily was an island that Christopher Columbus had discovered America, or that the English were not Mohammedans. In his youth, however, though too imbecile for study or business, he was not incapable of being amused. He shot, hawked and hunted. He enjoyed with the delight of a true Spaniard, two delightful spectacles, a horse with its bowels gored out and a Jew writhing in the fire. The time came when the mightiest of instincts ordinarily awakens from its repose. It was hoped that the young king would not prove invincible to female attractions, and that he would leave a prince of Asturias to succeed him; a consort was found for him in the royal family of France and her beauty and grace gave him a languid pleasure. He liked to adorn her with jewels, to see her dance, and to tell her what sport he had had with his dogs and his falcons. But it was soon whispered that she was a wife only in name. She died; her place was supplied by a German princess nearly allied to the imperial house. But the second marriage, like the first, proved barren and long before the king had passed the prime of life all the politicians of Europe had begun to take it for granted in all their calculations that he would be the last descendant in the male line of Charles V.

Meanwhile a sullen and abject melancholy took possession of the King's soul. The diversions which had been the serious enjoyment of his youth became distasteful to him. He ceased to find pleasure in his nets and boar spears, in the fandango and the bull fight. Sometimes he shut himself up in an inner chamber from the eyes of his courtiers. Sometimes he loitered alone from sunrise to sunset in the dreary and rugged wilderness, which surrounds the Escurial. The hours which he did not waste in listless indolence were divided between childish sports and childish devotions. He delighted in rare animals and still more in dwarfs. When neither strange beasts nor little men could dispel the black thoughts which gathered in his mind, he repeated aves and credos; he walked in processions; sometimes he starved himself; sometimes he whipped himself. At length a complication of maladies completed the ruin of all his faculties. His stomach failed, nor was this strange, for in him the malformation of the jaw, characteristic of his family, was so serious that he could not masticate his food and he was in the habit of swallowing ollas and sweatmeats in the state in which they were set before him. While suffering from indigestion he was attacked by ague. Every third day his convulsive tremblings, his dejection, his fits of wandering seemed to indicate the approach of dissolution.

In a very short time the King's ma ady took a new form. That he was too weak to lift his food to his misshapen mouth, that at 37 he had the bald head and wrinkled face of a man of 70, that his complexion was turning from yellow to green, that he frequently fell down in fits and remained long insensible, these were no longer the worst symptoms of his malady. He had always been afraid of ghosts and demons and it had long been necessary that three friars should watch every night by his restless bed as a guard against hobgoblins. But now he was convinced that he was bewitched; that he was possessed; that there was a devil within him; that there were devils all around him. He was exorcised according to the forms of his church, but this ceremony instead of quieting him scared him out of almost all the little reason that nature had given him. In his misery and despair he was induced to resort to irregular modes of relief. Meanwhile, in this distempered mind of Charles, one mania succeeded another. A longing to pry into those mysteries of the grave from which human beings avert their thoughts had long been hereditary in this house. Joanna, from whom the mental constitution of her posterity seems to have derived a morbid taint, had sat, year after year, by the bed on which lay the ghastly remains of her husband, apparelled in the rich embroidery and the jewels which he had been wont to wear while living. Her son Charles found an eccentric pleasure in celebrating his own obsequies, in putting on his shroud, placing himself in the coffin, covering himself with the pall and lying as one dead till the requiem had been sung and the mourners had departed leaving him alone in the tomb. Philip II. found a similar pleasure in gazing on the huge chest of bronze in which his remains were to be laid, and especially on the skull which encircled with the crown of Spain, grinned at him from the cover. Philip IV., too hankered after burials and burial places, gratified his curiosity by gazing on the remains of his grandfather, the Emperor, and sometimes stretched himself out at full length, like a corpse, in the niche which he had selected for himself in the royal cemetery. To that cemetery his son was now attracted by a strange fascination."

The daughter of Philip IV., of Spain, married Louis XIV. Of her descendant, Louis XV., Carlyle remarks:

"He had always the kingliest abhorrence of death, unlike that praying Duke of Orleans, Egalite's grandfather—for indeed several of them had a touch of madness—who honestly believed there was no death. He started up once upon a time, glowing with sulphurous indignation on his poor secretary, who stumbled on the words: 'The late King of Spain.' 'Late King, Sir?' 'My Lord,' hastily answered the trembling but adroit man of business. 'It's a title they take." Sometimes Louis IV. would go, or stopping his court carriage, would send into churchyards and ask, 'How many new graves there were to-day?'"

The French descendants of the Spanish line have continued to display the mental defects which led to the expulsion of the Bourbons from the thrones of Europe. The suicide of Crown Prince Rudolph and King Ludwig of Bavaria, and the imbecility of King Otto demonstrates that the taint is still rife. The interesting point in this history is not the long persistence of the neurotic taint, but the persistence of the dental and oral and final stigmata so emphatically as to be recognized by historians.

The following history of Charles VI., of France, has just come to light for the first time and is of unusual interest to us in the present paper:

At the Congress of French-Speaking Alienists, (Report in *Le Progrés Medical*, August 18, 1894) M. August Brachet, former examiner and professor at the Ecole Polytechnique, Laureate of the Institute, read a note entitled: "Concerning the Nature and the Form of the Insanity of Charles VI., of France." The clinical interest is in the richness of the predisposing cause (unique, since it is the only insane individual of whom we have in pathologic documents the history of eighteen direct ancestors) and in a historic point

of view, as regards the capital question of the responsibility of Charles VI. in the remissions of these twenty-eight years of insanity. The history has not been studied by alienists for lack of access to the sources (government archives, chronicles of the times, relations of ambassadors).

Predisposing Cause.—Paternal line (father, Charles V., gouty, cardiac disorder; grandfather, Jean le Bon, arthritic; great-grandfather, Charles of Valois, apoplectic; great-great-grandfather, Philip III., the Hardy, sexual pervert. Maternal line (hitherto unknown to alienists or historians); mother, Jeanne de Bourbon, insane; grandfather, Louis de Bourbon, married the daughter of a lunatic; great-grandfather, Robert de Clermont, traumatic insanity, consecutive to cerebral commotion.

Determining Cause.—Typhoid fever in May, 1392.

Immediate Cause.—Two months later, isolation in the Forest of Mans, Aug. 5, 1392. Insanity for thirty years. Character of the remissions, mental confusion, as might have been expected from the infectious nature of the primary cause. Hence complete incapacity for government during the forty-eight remissions in these thirty years of insanity.

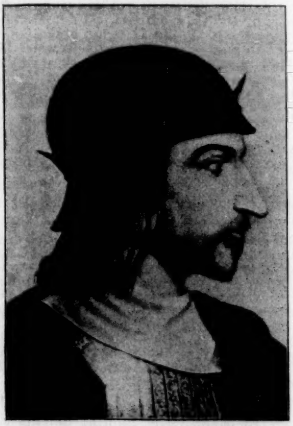

Figure 1.—John II. of Castile.

Conclusion.—Charles VI., insanity of infectious origin in a hereditarily predisposed individual (maternal, vesanic; paternal, arthritic heredity).

I regret that it is impossible to obtain a picture of this monarch because we should, without question, be able to show marked stigmata of the head, face and jaws.

Figure 1.—In John II. of Castile we observe marked stigmata. A receding forehead, small sunken eyes, a long, slender, excessively developed nose, short ram; and long body of the lower jaw and arrest of development of the chin.

Figure 2. Charles the Bold.—The picture of a boy apparently 6 to 8 years of age. While too young to determine the exact stigmata of the entire face, there is a general appearance of hereditary taint with one side of the face lower than the other. Defects in the eye and arrest of the lower jaw.

Figure 3.—The portrait of Pedro I., of Castile, shows a very narrow forehead. Eyes set close together. Long, slender nose. Prominent cheek bones. Arrest of development of the upper jaw and fairly well developed lower jaw.

Figure 4. Ferdinand the Catholic.—Is not unlike the father (Fig. 3). Narrow forehead. Eyes set closer together. Long, slender nose. Cheek bones undeveloped. Arrest of the upper jaw and excessively developed lower jaw.

Figure 5. Charles V.—Illustrates a very deformed face. The forehead broad and low. The eyes wide apart. The left eye higher than the right. The nose long and slender. Cheek bones, bone of the face, and upper jaw arrested in their development. The lower jaw protruding from three-fourths to one inch beyond the upper. Mouth open, owing to excessive development of the ascending rami, and mouth breathing.

Figure 6. Ferdinand of Austria.—Presents marked degeneracy. Long, handle-shaped ears. Narrow forehead. Eyes set close together. Marked deformities of the orbits and eyes. Long, slender nose. Arrest of bones of face and upper jaw. Narrow lower jaw.

Figure 7. Philippe I.—Has a narrow forehead, eyes set wide apart, long slender nose, excessively developed zygomae, arrest of the face at alae of the nose and arrest of upper jaw.

Figure 8. Philippe II.—Shows a long, handle-shaped ear. Full forehead. Left eye smaller than right and irregularly placed in their sockets. Face arrested from superior orbital ridge producing concavity of the face as far down as the cutting edges of the superior teeth. The nose long, slim and sunken. The lower jaw apparently well developed.

Figure 9. Philippe III.—Illustrates a small cranium. Narrow, receding forehead. Eyes set wide apart. Short, stubby nose. Marked arrest of the bones of the face and bridge of the nose, also arrest of the superior maxilla. Marked protrusion of the lower jaw, which may be normal. The apparent protrusion being more noticeable owing to the marked arrest of the bones of the face and superior maxilla.

Figure 2.—Charles the Bold.

Figure 10. Philippe IV.—Shows a very striking neurotic face. High, narrow forehead. Although the ear is not shown, with such a long, narrow head we would expect a long, narrow, handle-shaped ear. Eyes set irregularly and close together. The right lower than the left. Long, thin nose. Arrest of the bones of the face and upper jaw. Excessively developed and protruding lower jaw.

Figure 11. Philippe V.—Here is a sensual face. Low, full forehead, eyes set far apart and high in forehead. Long slender nose, high cheek bones and arrest of the upper and lower jaw.

Figure 12. Charles II.—Also illustrates a very neurotic face. Low forehead. Eyes close together. Long, slender nose. Marked arrest of all of the bones of the face and upper jaw, carrying the nose inward. Apparently protruding lower jaw.

Figure 13.—The beautiful face of Catharine d' Aragon displays very little stigmata. All that can be observed is a

fullness at the left superior orbital sides, a long slender nose and arrest of the lower jaw.

Figure 14. Queen Mary of England.—Shows a very striking face. Large, full forehead with excessive development above and to the left of the left eye. Eyes set abnormal and wide apart. Nose short, arrested at bridge, and flat and broad

Figure 3.—Pedro the Cruel.

at alae. Facial bones arrested, carrying the nose inward. Body of lower jaw excessively developed. Chin arrested. While I can not state positively that deformities of the vaults and dental arches are present in all these cases, my experience is that in most cases where there is arrest of bones of the face and upper jaw, we also find V- or saddle-shaped arches.

Figure 4.—Ferdinand the Catholic.

NOTE.—These illustrations are taken from photographs of paintings by famous artists, and were obtained from Sucesor de Laurent, Madrid, Spain.

Stigmata of degeneracy are just as marked in regicides (who represent the canaille, middle class and aristocracy) and the percentage of deformities as great as in the aristocracy. In an examination of the mental condition of these individuals, while they are not always absolutely insane, as a rule they can not be said to be normal individuals. They can not be classed in

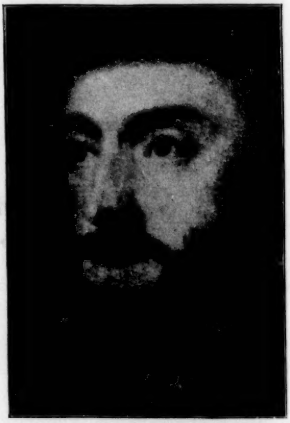

Figure 5.—Charles V.

the same grade; each is a study in itself and no two possess exactly the same peculiarities, yet all are on the verge of insanity. Most of these individuals as will be observed, possess some systematized delusions, and are therefore called paranoiacs. If a

Figure 6.—Ferdinand of Austria.

study of the parentage of each individual could be made, abundant cause would be found in each case for not only their peculiarities, but the marked deformities which exist throughout the entire body showing manifold signs of hereditary taint.

Figure 15.—John James Ankorstrom or Anckerstrom. Swedish gentleman, born 1760, executed 1792. Sworn regicide. Killed Gustavus III., of Sweden, March 16, 1792. No statement about him in Regis' text, only his picture.

Head excessively developed at occipital region. Low receding forehead; arrest of the bridge of the nose; long,

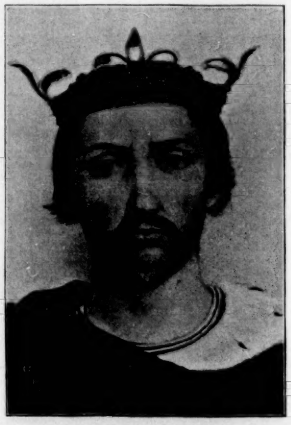

Figure 7.—Philippe I.

slender, aquiline nose; arrest of development of the lower jaw.

Figure 16.—History of Mariotti, as communicated to Dr. Regis by Dr. Deny, of the Bicêtre:

Mariotti is a man aged at present 63 years, who has followed various occupations, and lastly was an employe of the

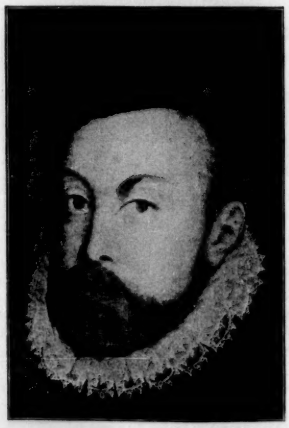

Figure 8.—Philippe II.

Panama Canal Company. During a month's sojourn in the hospital on account of fever, his daughter died, and this became the starting point of his delusion. He imagined that his daughter had been enticed away, dressed as a man and assassinated. From this time on he had but one object in life; to secure the punishment of her murderer, and reparation for his loss. All his endeavors having failed, he concluded that the chiefs of the Canal Company, M. de Lesseps especially, were endeavoring to suppress the facts, and so one day, receiving no response to his demands, he posted himself where the Minister of Foreign Affairs would pass, and fired a pistol at his carriage. Arrested at once, he de-

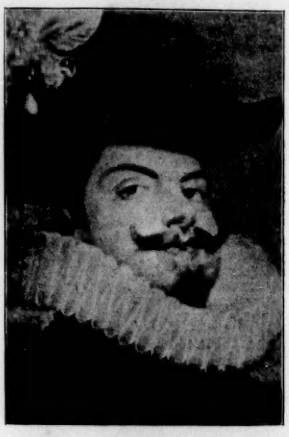

Figure 9.—Philippe III.

nied positively any intention of killing the Minister. Nothing would have been more easy, said he, as the carriage was not moving; he did not even aim at it, but fired into the ground. *His only idea was to force the government to bring him before the court so that he could obtain justice.* He was clearly a paranoiac, one of the persecutory type in which the suf-

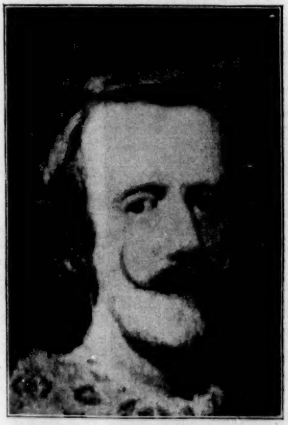

Figure 10.—Philippe IV.

ferer, from delusions of persecution, becomes himself a dangerous individual.

Upper part of head very small, tapering from the ears upward. Receding forehead. Excessively developed upper left side of head—arrested right side. Eyes small and sunken. Nose short and thick. Cheek bone excessively developed. Ears long, handle-shaped. Arrested development

of the upper jaw. Arrest of development of right; excessive development left lower jaw.

Figure 17.—Jacques Clement. Jacobin monk. Born at Sorbonne (Diocese of Sens) in 1567; killed Aug. 1, 1589. Typical regicide (religious mysticism). Assassin of Henry III., Aug. 1, 1589. (Knife). (Engraved by Massard from the original in the Library at Blois.)

Figure 11.—Philippe V.

Clement was an ignorant monk, of gross libertine tendencies, excessively bigoted; the mere word "heretic" made him furious; he had hallucinations, as is shown by the following, quoted by Dr. Regis, and given by him as the type of those of the regicide:

"One night, Jacques Clement being in bed, God sent to

Figure 12.—Charles II.

him his angel in a vision, who appeared with a great light and showed him a naked sword with these words: 'Brother Jacques, I am a messenger from Almighty God, who comes to announce to thee that by thee the tyrant of France is to be slain; think, therefore, of the martyr's crown prepared for thee.' Thus saying, the angel disappeared." (Palma Cayet).

Full, low forehead. Eyes set far apart. Dark brow, excessively developed. Long, slender nose. Arrest of development of lower jaw.

Figure 18.—Francois Ravaillac. Domestic, clerk, schoolmaster, etc. Born at Touvres, near Angouleme, in 1578,

Figure 13.—Catharine d' Aragon.

executed May 27, 1610. Type, religious mystic. Assassin of Henry II., May 14, 1610. By a contemporary. (Fac-simile of one of the rarest of the collection of historic engravings.)

"Ravaillac, of rather tall stature, powerful and large of limb, cross-eyed, with dark, reddish hair, was a somber melancholiac, tormented like Clement with hallucinations. See

Figure 14.—Queen Mary of England.

how he is described by the judge and historian, Matthieu, his contemporary: 'He threw himself into the Monastery of Feuillans, and left it on account of his mental weakness. Those who stayed there have since told me that he was altogether beside himself, and that the word "Huguenot"

turned his madness into fury. His mind was distracted and bigoted, susceptible to every impression. After he returned home he was in prison a year for homicide. He was wayward in the palace, insane in the cloister, and became desperate in the prison, where he had visions and dreams.'" Regis, "Les Regicides," p. 20.

Long, narrow head. Long, slender nose. Prominent cheek bones. Arrest of development of the bones of the face and upper jaw. Normal lower jaw.

Figure 19.—John Wilkes Booth, the third son of the noted English tragedian, Junius Brutus Booth, born in this country in 1839 and was 26 years old when he shot and killed Abraham Lincoln, President of the United States, April 14, 1865. He was a rank secessionist, and was one of a party of

Figure 15.

Figure 16.

conspirators who had for a long time contemplated the death of the President, but were foiled in every attempt. At last when Lee surrendered and it seemed that the defeat of the Rebel Army was complete, he with others sought to kill the men who were at the head of the government, hoping thereby to paralyze it.

Booth had received from his father, who was himself called by the significant name of Junius Brutus, the name of John Wilkes, in memory of the English politician who, in the reign of George III., had given pretext to the rallying cry of "Wilkes and Liberty." The entire life of Junius Brutus Booth, a genuine lunatic though an actor of genius, was, moreover, only a long succession of eccentricities, impulses and acts of insanity. Among other things, he was a mystic. His belief in the sacred character of the lives of animals was such that he could not bear to see them killed or mal-

Figure 17.

Figure 18.

treated without reason, and that he never ate meat, even forbidding his family to eat it. He was well versed in the knowledge of different religions, giving great importance to the Koran, passages of which he annotated; he read the Talmud in Hebrew and gravely discussed religious mysteries with Catholic priests. He never failed to bow his head in passing a church, he frequented churches of all denominations, participated with fervor in all their ceremonies, scrupulously observed all the practices of devotion, and passed whole hours in prayer. His last words, pronounced in the ear of the ship's steward, his only attendant at the hour of his death, were: "Pray; pray; pray." (Kellogg). Regis, pp. 27 and 28.

It is said of the elder Booth that, one evening while playing Richard III, in the last act, he refused to die (believing he was the original Richard); he fenced his opponent off the stage through the door into the street. His opponent becoming exhausted from parrying his deadly thrusts called upon the people to interfere.

The photograph from which this picture was taken was obtained by the author in Boston the winter before the mur-

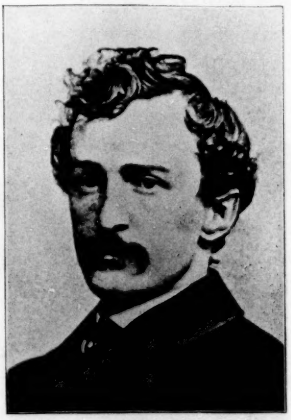

Figure 19.

der, and is an excellent likeness. The stigmata are nicely shown.

The head and forehead are apparently well developed, eyes small and sunken; ears excessively and abnormally developed; nose normal; facial bones and upper jaw arrested; partial V-shaped dental arch; well developed lower jaw.

(To be continued.)

THE EFFECTS OF MODERN DRESS ON THE HEALTH OF WOMEN.

* Read before the Indiana State Medical Society, Indianapolis, Ind., May 17, 1894.

BY MARTHA J. SMITH, M.D.

INDIANAPOLIS, IND.

Every woman's dress expresses, not only some of her own individuality, but it expresses even more, her unity with the race; the common history and status of her sex. Of all nations of the earth we suffer most from the cruel tyrannies of dress.

American women are known abroad for two distinguishing traits (besides possibly their beauty and self-reliance), and these are their ill health and extravagant devotion to dress. We strike the sturdy German and English matrons with dismay. Without the trailing skirt of a year ago we were told we were bereft of our grace, our loveliness, our womanliness. Men are excellent theorizers upon the absurdities of modern dress, but when a practical application of their theories is made by their wives and daughters or sisters, few are found brave enough to stand by and encourage them to wear only such garments as are conducive to their health and comfort. Yet what pathetic sentiments they pen upon the physical frailty of women.

The dress adopted by the women of to-day certainly is conducive to the development of many diseases, and proves both a predisposing and exciting cause of them.

Dr. Thomas J. Mays, of Philadelphia, who studied

the types of respiration in eighty-two Indian girls, varying in age from 10 to 20 years who had never worn tight clothing, found the abdominal type of breathing was very marked in every case. He came to the conclusion that the costal type usually observed in civilized women was artificial, and the result of modern dress.

Dr. J. H. Kellogg has since then examined the mode of respiration of several Chinese and Indian women, whose dress does not constrict the waist, and found also the abdominal type of breathing. He found the same in civilized women who wore no corset, and that this type of breathing was prevented by putting on a corset. He produced the costal type of breathing in a man by putting him into a corset.

Hutchinson found the costal type marked in twenty-four girls, whose ages varied from 11 to 14 years, who had never worn a corset or tight clothing around the waist. Gibson states that the difference in the type of breathing begins as early as the tenth year. Reigel asserts much the same thing. It seems there is reason to believe that the costal type of breathing has become established in civilized women, and it has not been proven that it has any injurious effect, but the harm done by tight lacing and tight bands about the waist must be admitted.

Rosenbach says that in a certain number the use of the corset seems to be productive of no ill results, yet this is not the case with the greater number of women. All hollow organs require room for the proper performance of their functions, and this the corset prevents. Especially are they injurious to those who labor with their hands, such as workers with sewing machines, and others who require free bodily action. The first effect of the corset on the muscles of the trunk and abdomen is limited motion. The constant pressure of tight bands and stiff steels debilitates and shrinks the muscles, rendering the flesh flabby, and exaggerating the bony structure in consequence. Entire freedom of action should be given to the chest for the perfect performance of the functions of respiration. Especially is this true at the base of the thorax near the diaphragm. The habit of contracting the body at the waist by tight clothing confines this part as by splints, and as the diaphragm thus contracts, all lateral expansion being prevented, it presses the contents of the abdomen upon the movable uterus, and forces this organ downward, and in addition to this about ten pounds of skirt are bound around the waist by tight bands, and held up by the hips and abdominal walls, which are rendered protuberant by this compression, and at further intervals pressed upon by the stomach. The displacement of the pelvic organs is in this way favored. In estimating the effect of direct pressure upon the position of the uterus, its extreme mobility must be constantly borne in mind.

This is illustrated by examining it by a Sims speculum, when, if the clothing be not loosened around the waist, the cervix is thrown so far back into the hollow of the sacrum as to make its engagement in the field of the instrument often extremely difficult; attention to this point in the arrangement of the patient will at once remove the difficulty.

Another result of this compression is the pressure upon the abdominal vessels, which interferes with the return circulation from the lower half of the body, producing congestions in these regions. The effect on the muscles of the middle portion of the trunk is to bring on partial atrophy or arrest of development. It has been said that injury caused by tight bands about the waist is avoided by wearing corsets beneath them. You need but a moment's notice to see this can not be true; the bands only help to adjust the steels and bones more closely to the yielding portions of the body. Most women will tell you they do not wear their corsets tight. I have never been able to find one who did, if we accept her own statement. A corset worn ever so loose, the moment the wearer sits the steels incline inward, and pressure begins upon the stomach and diaphragm, which in time shortens the front length of the body from the neck, drawing it downward perceptibly, and ungracefully crowding the bosom upward and abdomen forward and out of place.

The stomach does not have the assistance of the diaphragm to pump lymph out of its walls in digestion. The bile is not removed from the biliary apparatus; the pancreatic juice is not pumped out of the pancreas. The kidneys lie in a state of motionless inactivity until the blood pressure is so great as almost to break through the delicate tubules.

The peristaltic motion of the bowels is impeded, and constipation with indigestion and malnutrition with fecal intoxication results.

W. B. Neftel, of New York, says his experiments on animals have demonstrated that a prolonged compression of the chest and abdomen invariably produces general anemia, serious congestions of the liver and other abdominal and pelvic viscera. The pressure on the cervix uteri when the abdomen is restrained causes it to move backward and forward over the pelvic floor with every respiration.

This is the point, you will remember, most frequently attacked by cancer in women. The uterus is exposed to this downward pressure about fourteen out of every twenty-four hours. The effect of the ends of the stays on the breast is to deform the lacteal tubes, and when they begin to secrete milk a cyst is often formed, which is not easily emptied. This retention often causes abscess of the breast. Cancer of the breast, there is great reason to believe, is often brought about from the irritation of the clothing.

The liver is not only compressed, but often folded upon itself, so that deep furrows are produced in it, and pieces have frequently become detached. Cancer may result from the irritation of the organ in this way. Abnormalities in the form of the liver and lateral distortion of the thorax are very common, and as a result a displacement of the organ or an alteration in form. Sometimes it is found rolled up into a conical mass, but more frequently deeply notched by the turning in of the margin of the ribs.

From its daily occurrence, the tight-laced liver has an importance in diagnosis greater than is otherwise its due. By the narrowing of the base of the thorax, the liver is compressed from side to side, and not infrequently there is produced a series of folds. At the same time, as a consequence of this circular contraction, a part of the right and usually the left lobe also becomes separated by a depression, the depression being sometimes higher or lower, according to the locality of the lacing. These furrows may penetrate deeply into the parenchyma, until only a ligamentous connection remains which allows a free motion of the separated portions. Tight lacing is one of the most frequent causes of abnormal positions

of the liver. The position varying according to the part of the gland which is subjected to the compression.

Frerich says one cause of chronic atrophy of the liver is tight lacing, corresponding to the extent and force of pressure.

Prof. F. Marchand, of Marburg, believes that tight lacing is one of the most frequent causes of the formation of gallstones. The pressure of the border of the ribs upon the liver during the day and at night no pressure, he claims, favors the stagnation of the bile and the formation of concretions in the gall-bladder. It becomes distended during the day and can not empty itself at night. He also states cancer of the liver may arise from this pressure. As a rule the course of the lacing furrow is obliquely across the right lobe of the liver, from which there is a tendency to atrophy of various degrees in the region of the gall-bladder.

It is not infrequent to find the gall-bladder tightly distended and extending far beyond the border of the liver, and in these gall-bladders stones are frequently found. Anything that exerts pressure on the biliary passages, especially the cystic duct, favors the formation of biliary calculi.

Dr. Rotter, of Munich, according to whose researches on gall-stones of 1,034 necropsies, found stones were present in men in 3.9 per cent. of the whole number, and in women 9.9 per cent. In as many as 40 per cent. of the female cases with gall-stones, there were present grooves and constrictions formed by stays.

Schuter found that a lasting compression of the chest would cause albuminuria.

Professor Bouchet draws attention to the fact that pressure of stays on the intercostal spaces in women suffering from intercostal neuralgia may give rise to paroxysms resembling angina pectoris.

It is said the soldiers of Austria were accustomed to retain their trousers about the hips by means of a leather strap; disease of the kidneys increased so alarmingly among them that especial attention was drawn to the subject, and it was decided that the closely buckled band about the loins was the cause of the evil.

Meyer states that tight lacing decidedly manifests an injurious influence on the eye in consequence of congestions resulting from obstructed reflux of blood from the head along the jugular veins.

Probably no other part of the human form except the waist has suffered more abuse and distortion especially among civilized people, than the feet. Many who condemn the Chinese custom of stunting the growth of their women's feet to the extent of practical uselessness deliberately squeeze their own into shoes too small for comfort and grace of movement. Chiropodists tell us the most distressing diseases result from cramping and pressure from badly-made and tight-fitting shoes. Few women are able to poise the body firmly and elegantly because of deformity of the feet, brought about through ignorance of the complex mechanism of these useful members and bungling efforts to improve their natural shape. Corns and bunions are evidence of ill-fitting shoes and shoes worn too tight, and no denial changes the fact. What man or woman can lay claim to fine mental balance who will deliberately stump through life with an ungraceful gait? It is a mistake to suppose the foot can not be clothed elegantly and attractively in any except French heels and pointed toes.

Only look for a moment at the anatomy of the foot and you will see that muscles that are unused remain in an infantile condition. This is illustrated by the arm kept in a sling and unused; it loses strength and at last size. The interference in the function of the muscle may be voluntary or involuntary; the result is the same; atrophy or arrest of development. The nerve which supplies the muscle is unused, and it suffers arrest of development.

If you put the foot of an infant at an early age in a modern shoe, the toes become immobilized and there is restricted motion at the ankle and the muscles in the sole are arrested in their development. The arrested movement of the ankle results in arrest of development in the strong flexors of the foot that are situated in the calf of the leg. The burden of walking is thrown on the muscles of the thigh and back, and they are consequently over-developed. The same thing follows when the well developed and mature foot is irrationally dressed. The imperfection of this organ restrains locomotion; this induces the sedentary habit with malnutrition and either dyspepsia and its concomitant evils or the stealthy onset of obesity, which may be well called the second curse of women. The intravascular and lymph circulation of the foot is much impaired and the bones become either sclerotic or vascular from over dilatation of their vessels when the constriction is removed at night.

The ligaments, too, become degenerated from improper blood nourishment. The plantar fascia is drawn up by the sole or heel of the shoe. A greater strain than normal is thus brought upon it during locomotion and standing.

When the shoe is removed the fascia takes a straight line, the abutments of the arch separate, a greater strain is thus brought on the lower ligaments of the joint and the upper ligaments are loosened.

The upper edge of the bones are crushed together and the pain is unendurable, and tight shoes must be put on to make walking possible. It is not difficult to imagine the pain which attends these changes in healthy bones, if one has ever suffered from a so-called bunion. But the effect on the general health, the spirits, the digestion, the assimilation are conceived with more difficulty.

The habit women have of wearing cotton underwear during the cold season of the year is extremely absurd. Pneumonia, diphtheria, tonsillitis, rheumatism, la grippe, etc., are often contracted in this way. Many women will tell you they can not wear woolen underwear, but the reason they do not wear it is because they fear they will increase their waist measure a fraction of an inch. Many have never seen or heard of the neat-fitting union suit or shirts fastened to a simple waist by two rows of buttons at the bottom.

The custom of wearing mourning is a ridiculous one from every point of view. Cases of melancholy are traceable to wearing heavy crape for mourning. The custom is simply shocking when discussed from either the standpoint of health or fashion. Sorrow should be too sacred for outward display and sign-board advertisement. It has a depressing effect at a time when one needs to rally all one's Christian fortitude and human philosophy to meet life with becoming resignation. We should not despise the charms that dress can give or neglect the adorning of our person, but we should also remember health and comfort are not to be sacrificed.

The dress need not be one so closely resembling that of men as to subject us to the charge of wishing to be men. All I envy in man's apparel is the opportunity for pockets which it affords. These I would like.

Although all men disclaim any preference for an unnaturally small waist, all women persist in believing that a wasp-like appearance, at whatever age and conditions is sure to render them lovelier in the eyes of their admirers. As the struggle to live becomes more intense men will select their wives from the healthy and strong if they are not attracted now by the beautiful and graceful.

Oliver Wendell Holmes has said with characteristic humor that it is impossible to make a perfect human being without beginning several generations before he is born. Men could have a great influence for good in this work if they realized its importance. Women dress not for their own comfort or health of posterity, but to please their brothers, their lovers, their husbands. Women physicians work here at a great disadvantage. With most women, save those in advanced rank of thought, any suggestion in the way of hygiene in dress is immediately branded as dress reform, and straightway the masculine type of radical dress is brandished.

Medicine has become the science of the prevention of disease rather than the cure of it, and it is true that the intelligent application of hygienic measures is supplanting the empirical use of drugs. The physician should give more attention to removing the predisposing as well as the exciting cause of disease, anticipating rather than awaiting the actual presence of sickness. It was not my object in this paper to give examples of dress. I have only tried to give you the effects of modern dress on the health of women.

DISCUSSION.

Dr. C. S. Bond, of Richmond—Mr. President, I do not wish this paper to go by without some discussion, because it is of great importance. Yesterday we had a paper on ophthalmia neonatorum, which was considered of such importance as to justify us in pleading with our legislators for protection against some persons who do not pay sufficient attention to that matter; and it might be important to plead still further with this same body to enact a law on the subject of women wearing corsets. It is certainly a bad thing. I do not see why the women do not quit it. The women seem to have this matter in their own hands, one might say, but they tell us the men are inclined to admire a woman who wears a corset. It is foolish in women to court admiration at their own cost. There is no doubt in the world that women would be more gracefully formed, more useful in the lines that they have to pursue, if they did not wear corsets. Every doctor who has much experience in the line of diseases of women sees frequently in his office persons who are suffering more or less from this trouble. All the difficulties that have been so admirably pointed out by the essayist come before us for observation almost every day in one form or other; and it is a matter of great importance, and might easily be remedied without subjecting the women to ungraceful forms. The time will come, probably, when the matter will right itself. I suppose among some of the Chinese and Japanese women to have a large foot would be an unpardonable sin. In this country it seems to be an unpardonable sin among women to have a large waist. The only way is to start a different style. A woman with a waist twice as large as is in vogue, were it not for the style, would be just as much admired. It is only that we have started to admire people in certain directions; so it seems to be a matter of fashion.

Dr. J. I. Rooker, Castleton—Mr. President, this is the thirty-fifth year that I have been attending the State Medical Society, and this is the first time I ever heard a woman take the rostrum and read a paper. The paper was certainly a very good one, and it would be a good thing if we could get it into the hands of the ladies. I know something about shoes; I think I have made, in my practice of thirty-five years, several thousand dollars on ladies' shoes. Shoes that are nothing but brown paper, and the result is that we have pneumonia. This paper should get into our public schools, and if the doctor would read it to the ladies it would be an excellent thing.

Dr. P. McNab, Indianapolis—Mr. President, I regard this paper as one of the very best and one of the most practical papers we have had during this convention. As a discussion of the question of hygiene it is certainly very fine. I do not want to discuss it at all; I only want to express my admiration of the paper.

Dr. John W. Hall, Portland—Mr. President, this is one of the most helpful papers we have had during the convention, and I desire to expressly commend something that will perhaps come to the minds of most members of the society, and that is the most excellent reading of the paper. We could hear it in the back part of the house more clearly than we could hear the majority of papers read by gentlemen. On yesterday we passed a resolution on the subject of nurses looking after the eyes of infants, and recommending that they be fined ten to a hundred dollars if they don't do it properly. It seems to me if we would appoint a commission to get the Legislature to pass a law that women should not wear corsets it would be much more sensible than the resolution passed yesterday. It has been said that men admire women with small waists. I know that sensible men, regardless of the medical profession, don't admire women who wear corsets and have small waists.

Dr. Wm. Flynn, Marion—Mr. President, throughout the State of Indiana, in almost every town, are societies composed of women, the object of which is the bettering of their condition, physical as well as moral and mental. Now I think if every doctor here would go home and get the ear of those societies and tell them that at Indianapolis there is a lady who is capable of giving them practical instruction, and have them courteously invite her to read her paper throughout the length and breadth of this State, she can accomplish something. All this jovial talk about the legislature goes for nothing. It strikes me that the best way to get good results is to get the facts in the paper before the people; and I would suggest that physicians—of course not gynecologists, because it would ruin their business—courteously bring up these questions at home, and get Dr. Smith to read this paper.

Dr. Florence W. Hays, Indianapolis—Mr. President, I think the subject-matter is one that has not attracted the attention of the medical profession until recently. Leaders in the dress reform movement have not been doctors, but have been educated, sensible women of the world, who have been hampered somewhat because they have not the requisite knowledge to know and understand the scientific facts. The paper this afternoon would be quite a revelation to a great many of the warmest advocates of dress reform, and in some way it should be brought to their attention. I think physicians owe themselves and society a duty in regard to this matter. They should take a more practical interest in affairs of this sort, and put themselves in line with dress reform and the teaching of physical culture. I think the series of lectures given this winter by some of our Indianapolis physicians before the Y. M. C. A. is a very good start in this direction, and the work should be continued and put on some practical basis, which would include hygiene of dress as well as the matters already discussed. In putting this question before the people directly, however, the trouble would be mostly not with the younger women, but the mothers and dressmakers. The younger women will be found willing enough to make changes that add so much to their comfort. In one of our large institutions of the higher rank in our State, even so long as ten years ago, while I was attending a college myself in which there were some three or four hundred young ladies pursuing the higher branches, fully one-half of those young ladies did not wear corsets through the week and study hours; and since that time the establishment of gymnasiums and the impetus given to outdoor sports of all sorts has, no doubt, lessened even that number.

One of the points not mentioned in the paper is the effect of corsets upon the vocal cords. This is well recognized by all teachers of the voice, both of elocution and of singing; and the rule is that corsets must not be worn during practicing hours. Some of our most talented and beautiful actresses and singers, Ellen Terry and others, abjure corsets altogether. Of course, artistic drapery is the essence of beautiful dress, and this can be easily attained without

corsets; but as to bringing this about in any practical way, no radical immediate changes could be made. Beauty is a a very important note to strike in this connection, and should be considered in all methods of reform. I saw in a fashion journal of a recent date a number of illustrations of dresses designed particularly to be worn without corsets. They were models of artistic excellence, and at the same time utility and comfort were much added to; and any changes to be made—of course no radical changes from the method and general appearance of dresses as now worn by women are to be made—must be on the principle of avoiding constrictions and supporting the dress from the shoulders in preference to the waist. In this connection union under suits and skirts fastened to waists with the dress are practical illustrations. When the details are perfected the future woman will be not only beautiful, but healthful.

DR. L. H. DUNNING, of Indianapolis—Mr. President, I do not rise to discuss the subject, but when Dr. Smith read this paper before our county society she gave us in response to questions a very excellent system of arranging clothes. It is a very practical point. Physicians need to advise. Our patients want some guide. If we are going to reform our lady patients we must give them something in place of their corsets, and suggest some improvements. I would ask the Doctor to give us her ideas of what advice we should give our patients when we tell them to take off their corsets.

DR. MARTHA J. SMITH, of Indianapolis—Mr. President, I believe I have nothing further to say, except that as Dr. Dunning has asked me to explain my ideas of dressing I will do so as briefly as possible. Have the dressmaker make a waist of the lining material of the dress, fitted to the form, with no stays at all, finished at the bottom with two rows of buttons, an inch apart, the lower one for the under skirts and the upper one for the dress skirt; or have the dress all made in one piece, such as the Empire or Grecian costume, and then the union suits for underwear. I think this is as simple a dress as any one could have, and it can be made in most any of the modern styles that one wishes. I wish to express my appreciation of the kind words spoken, and I thank you all for your attention.

SELECTIONS.

AN INTRODUCTORY ADDRESS TO THE STUDENTS OF THE MEDICO-CHIRURGICAL COLLEGE.

Delivered Oct. 3, 1894.

BY L. WEBSTER FOX, M.D.
PHILADELPHIA.
PROFESSOR OF OPHTHALMOLOGY IN THE MEDICO-CHIRURGICAL COLLEGE.

A Senator, quite famed for his eloquence, asked a brother Senator, who sat beside him during an introductory debate in Congress to stop and hear him speak. The friend replied: "If you are going to make a speech I would be very glad to listen to it, but if you are going to read one of your infernal compositions I do not propose to stay." By a dispensation of your Faculty, I have been obliged to trespass upon your indulgence this evening, and ask you not to leave the room before my composition is read.

This day marks an epoch in your lives. You have launched your canoe on a stream full of hidden rocks; many snags, much disappointment, and no few hardships will overtake you before you arrive at the great ocean of your professional life, which as yet hides from you those worlds you intend to conquer. You do not here leave behind you your student life,—you have only shunted to another track; you now only concentrate your studies to a more definite purpose. You have elected to master the subtleties of a noble profession, and an inestimable service lures you toward its mastery. You have no doubt decided upon this avocation only after the most careful consideration and thought. Your friends trust you, and we trust you; see therefore to it that you neither disappoint yourselves nor us.

No profession demands more from her students than Medicine. She is a jealous mistress. The midnight oil must be consumed; untiring and unceasing your efforts must be made before you can become proficient in your art. The late Sir Andrew Clark, in an address to a class of medical students, said: "Labor is the life of life. Nature will let no man overwork himself unless he play her false."

The majority of you come from the rural districts, all endowed with strong constitutions, clear heads, and good nerve force. See to it that you do not play your natures false. You will be surrounded by the glitter and glamour of city temptations—fascinating and pleasant as the Lorelei's glance. Some of you may become easy victims to the sorceress. Leave her and turn aside, and stick to your calling. Remember, as Dickens has said: "It is well for a man to respect his own vocation whatever it is." You have more to do than simply to respect your calling. Remember, that, in joining the ranks of the students of the Medico-Chirurgical College, you must respect them. You have also a Faculty to consider, who is closer to you than a parent. But I feel confident, when I look upon the bright, intellectual countenances about me, that the above advice is perforce unnecessary. What a grand thing it is to meet students with a purpose! I see it stamped on all your countenances. I see more; and I hear you utter: "Oh, gentle Faculty, by and through your aid we will win." It is written in letters of burning flame upon all your pennants. You ask, Is it fair that all should be demanded from the student and nothing from your instructors? No; your Faculty have grave responsibilities in directing you in the way you are to acquire the science of the healing art. They have been awake to this fact for a long time. The changes in the policy of the school, the selection of the best teachers in the various departments, the addition of new chairs, the selection of laymen of recognized and superior ability in their respective walks of life, all tend to make this College one of the most scientific and practical in the country. Your College has adopted a course which is out of the beaten track, ambitious outside of the old-fashioned type of college teaching. Your Faculty do not wish to be known as men who simply know their books; they will show you that here you will obtain, not only a safe and sound scientific education in medicine, but also eminently a practical one as well.

"The foundation of our art is knowledge of the material to be worked upon,—the human body. Anatomy to its uttermost details, anatomy naked-eyed and minute, normal and abnormal, healthy and diseased, is the foundation of all good surgery." So said J. Greig Smith, and so says our Nestor of anatomy, Professor Pancoast.

Your teachers of anatomy will lead you on, gradually and pleasantly, through the structure of the human body, which you must know all about. How can you expect to become proficient except you know thoroughly the genesis of your profession? The great Titian was a master at mixing paints before he could produce the matchless gems which are still the admiration of the artistic world. Michael Angelo had to know how to temper his chisel before he aspired to produce that wonderful statue of Moses; Morse, the conductility of metals before he could send messages with lightning speed to the uttermost parts of the earth. Houston, in connection with his former colleague Thomson, had to produce a dynamo before

they could let loose the Promethean spark that now illuminates this and hundreds of other cities the world over. In all the mechanical arts men must understand the foundation of their calling if they wish to succeed. Is it less to ask you to labor unceasingly to understand the framework, the chemical laboratory, the animated organism, the wonderful handiwork of God,—man?

In the acquirement of your profession you will not so much, as time rolls on, be carried to greater heights, but to broader fields of knowledge; and, at last, when you have filled the cells of your brain with theory, then the practical side of your teaching will be given you,—a knowledge so essential to your success in life. Many of you will elect to become general practitioners. Of what value to you is the knowledge imparted by your professor of anatomy, unless you can appreciate and follow the teaching of an Anders, or the application and technique of surgery as taught by Laplace and Ashton? "What hearing is to the physician, so is touch to the surgeon. It is the intellect which teaches both. So, when the opportunity arises, educate both ear and hand."

In this class we confidently hope to find many young men born to be masters of their art. To such I would say: Though work comes easy, work all the harder; make the talent given you increase and multiply. Though you may have genius, yet patience and hard work are necessary to make even genius fruitful. To those who have not been so well endowed, much may, nevertheless, be accomplished by perseverance. Your Faculty will lend all of you an ever-helping hand. The fable of the victory of the tortoise over the hare should be fresh in your memories. As the masses, your future patients, become more highly educated it behooves you to aspire to a higher grade of intellectuality. We must to-day have physicians who are not only skilled in their profession, but who have a mind sufficiently broad to cope with the living questions of the day. In no time of the world's history are the intelligence and judgment of physicians so largely sought after and so highly esteemed in the important questions as how best to cope with epidemic diseases in densely populated communities. If I may make a criticism, I must say that the preliminary education of the young men who are choosing the medical profession for their life-work has not been as thorough as it should be. In this State it is now necessary to pass two boards of examiners before you can practice medicine. Is this fair under existing laws? I say emphatically, no! The State puts on the restrictions, but does she in like manner give us a preventive? While our commonwealth is doing much to foster education, she is far behind in giving aid to young men who eventually must look after the health of her people. The actual prevention of outbreaks of virulent diseases or of blindness is far cheaper than trying to eradicate such evils after they have become epidemic. But in the meantime where must this aid come from? Clearly, we must look to the men who, in the abundance of their wealth, can afford to build laboratories and found institutions where young men can get this preliminary schooling.

The older countries of Europe are far ahead of us in these matters; their medical chairs are richly endowed by the State, and their occupants do nothing but investigate, analyze, and transmit. If the public wish protection, they must perforce lend us a helping purse. I must quote what one of our leading teachers in medicine says on this subject:[1] "In this country, for the most part, we can not look to the State for endowment for medical education, but we must appeal to private beneficence. A few public-spirited and generous men and women have already given practical proof of their appreciation of these facts. With more general and fuller realization of these needs and present condition of medical education, and the results that can be secured by its liberal endowment, there is every reason to believe that these benefactions will be largely and rapidly increased, and that thereby the condition of medical education in this country shall cease to be a reproach to us."

How can we escape from this reproach? You young men who have not had a college education can now take advantage of your environments. You have arrived at an age when your mind becomes retentive and capable of becoming burnished by attrition. In this large city instructive lectures are given on a variety of intellectual subjects. The Franklin Institute throws her doors open to you all. The Academy of Natural Science in like manner extends a helping hand. The Young Men's Christian Association and our churches, whose pulpits, are filled by the ablest clergy in the land, will also welcome you. Select such plays at our theaters as will rest your mind by the way of diversion. Study not only the words, but the grace and movements of the actors. Remember, it is not fair to yourselves to try to brighten your minds and let your bodies remain awkward and ungainly. Plato said: "That one must form not only a mind, and not only a body, but both a mind and a body, to become a man."

In practical medicine, as in many of the mechanical arts, we need not fear reproach. We have shown the world what we can do; but how much better it would be if our scientific knowledge were equal to our mechanical skill! Then we should have students flocking to America for their medical education, just as we are having students from all over the world flocking to our twin sister, the Philadelphia Dental College, which leads the world to-day in practical dentistry. Handicapped, as we are, we are nevertheless progressing. Your college is heading toward that plane of efficiency which places her in the front rank of medical institutions. Many additions have been made to the corps of instructors. Two new chairs have been added, a chair of physics, and it is with great pride that I revert to the fact that the gentleman who fills that chair is eminent in his department, and honored not only in this country, but throughout the whole scientific world. Gentlemen, it is a rare privilege that you will have the opportunity of listening to such a teacher as Prof. Edwin J. Houston. Another chair which has been added, and which will be of superlative value to you, is that of electro-therapeutics. In Professor Kennelly you have an instructor who is one of the leading masters in this new department of science.

And so I could continue to speak of the other teachers recently added to the College. With such additional advantages, you will continue to keep the olive and the gold[2] ever bright, ever shining. There are other opportunities given you for advancing yourselves. You have a variety of fraternal associations;

[1] Prof. William H. Welch, M.D., Baltimore, Md.
[2] College colors.

you will be asked to join quiz classes and societies. Join them, and become active workers. Let the "pride of ambition and the inspiration of generous emulation" help you to individual achievement. Let each week have its review. Not only drive the nail, but clinch it. By this means you will become adepts by asking and answering questions. If you fall below your classmates, their success will be a means of stimulating you to better work. Some of the most pleasing recollections in after-life will be your class-day associations. As you go on from one semester to another, your line of instruction will be in keeping with your progress. Your last two years will find you in the field of practical medicine. I mean by this that you will be given the opportunity of becoming thoroughly acquainted with disease at the bedside. You will learn the technique of surgery, gynecology and obstetrics and in the special departments, such as ophthalmology, otology, and dermatology you will have opportunities unsurpassed. Our large clinics in the various departments warrant me in making this statement.

You are on the verge of a future which will, at the touch of your hand, show mighty developments. Let another Pancoast, Gross, Pasteur, or a Koch be found among your class. "Do what you can in your life; make what you can of your life; but, above all, love the highest and deepest and best that you can." As you stand on the shore of the great ocean before you, do not think that you have no other motive than to acquire sufficient knowledge to enable you to pass your examination and thus get a diploma. Medicine is not a complete science; many changes have taken place in the medical world during the last decade; many more will be unfolded in the next ten years. Look what changes have been produced by the discoveries of Pasteur and Koch! In many diseases the whole line of theory and treatment has been changed. Contrast the surgery of to-day with that of a few years ago! How little is known about contagion! The vast field of preventive medicine is almost entirely unexplored. I feel sure that the day is not far distant when such a chair will become the most important in medical colleges. You, who are inspired, remember that many crowns of laurel await you. You may not acquire wealth in gaining these honors, but you may do more,—you may confer blessings upon your fellow-man. "Who can estimate the money value of the discoveries of Louis Pasteur to humanity?" asks one of our ablest writers. In the opinion of Professor Huxley, these discoveries "have made good the war indemnity of five thousand million francs paid by France to Germany."

Personal habits have much to do in making or unmaking a professional career. Abstain from all unpleasant habits. See that your bodily health is as well looked after as your mental. Young men when they join college classes are sometimes led away by the idea that to chew tobacco, use profane language, and approach the slovenly are passports to manliness. Do not make this mistake. If education refine the mind let your habits refine your body. Remember that, of all men, the medical practitioner should be, above all things, a perfect gentleman.

A Case of Double Penis and Imperforated Anus and Rectum.—On the night of July 7, I was called to attend Mrs. T. in her sixth confinement, and delivered her of a ten pound boy. The first thing to attract my attention after the child was delivered was that it had two well developed male organs. Each penis is perfectly formed, situated on a line, one one a little to the left, the other a little to the right of the median line. They are one-quarter or half inch apart. Each organ is as large or perhaps a little larger than usual for an infant and fully up to the standard in every particular. He passes a good stream of urine through each organ at the same time. The urethra bifurcates in the perineal region sending a branch through each penis. The scrotum is divided into three compartments by two raphes; the right and left compartments each contain a testicle, and the middle compartment contains a mass resembling a testicle to the touch. Not thinking of any other malformation, I did not make any further search for anything that night, as I thought the little fellow had enough already to make him famous if he lived. I left the mother and child doing well, and on the following afternoon was consulted by the child's father, who stated that it was nauseated and vomiting occasionally. I suggested that they give it a dose of castor oil, thinking that perhaps its bowels needed to be evacuated. On the next morning I called to see the mother, and upon inquiry, learned that the infant was still nauseated and vomiting. Upon examination, I found the abdomen and

stomach greatly distended, respiration very much acceler ated, pulse very rapid, face cyanosed, and the child crying out as if in pain. It strained frequently as if its bowels were acting. I examined further and found an imperforate anus. There was not any rectum. Just a little to the right of the median line was a depression resembling an anus, covered with a subcutaneous areolar tissue. There was not any bulging at this point to indicate a rectum or cul-de-sac inside as is usual in these cases. In the median line was a rather hard gristly substance. While Dr. Cherry administered an anesthetic, I made a crucial incision, as Gross advises in his admirable work on surgery. The incision was extended across the median line into the depression on the right of the median line, and carried upward and backward, going about two and three-quarters or three inches up, when we reached the gut or cul-de-sac. A free incision was made into the cul-de-sac, which was followed by a copious discharge of dark offensive meconium. After this was discharged the distension was diminished greatly relieving the infant, who came out from under the anesthetic all right, and rested well during the night. We advised the administration of a dose or two of oil, which was followed by several discharges from the bowels, after which time the bowels acted regularly.

The mother was instructed to dilate the artificial opening with her index finger, two or three times daily. The parts were kept oiled with carbolized oil, and syringed out after

each discharge with carbolized water for two or three weeks. The mother failing to keep up the process of dilating, there was a tendency to close up, and at the expiration of thirty days from the operation, it was necessary to dilate the artificial opening more thoroughly. While my friend, Dr. Wynne, administered an anesthetic I dilated and extended the incisions until we got a good free opening. The mother is keeping up the process of dilating three times a day since then. The bowels act as regularly as any child's, and the process of dilatation does not give the child any pain. It is in perfect health and has been all the time. It is now over three months old and is developing nicely. At the age of thirty days it weighed fourteen pounds, and at the age of sixty days it weighed seventeen pounds. The malformations were photographed at the age of two weeks, and the other photograph was made at the age of three weeks.—(By DR. J. D. COLE, in *Nashville Medical and Surgical Journal.*)

Kaat, the Indigenous Stimulant of Southern Arabia.—Dr. Zwemer, writing from Sanaa, Yemen, to the *Christian Intelligencer*, brings to notice some facts regarding a plant, whose name is almost unknown outside of southern Arabia. In Yemen, however, it is consumed very largely by the adults of both sexes, and is highly taxed. Not less than one thousand camel-loads are brought from the interior to be disposed of at the Aden markets. It is commonly brought into the market in the form of bundles of green twigs, the leaves of which are chewed by the Arabs who have become familiar in its use. The chosen hour for kaat chewing is the close of the day, and it is a strange sight to the foreigner to see the sober-minded Arabs sitting down in groups for the purpose of a social chew of the leaves of the kaat. The following is the best description thus far given in the journals, of this comparatively unknown substance:

"Kaat (*Celastrus catha edulis*) is a shrub or small tree which grows at an altitude of about five thousand feet in the lower mountains of Yemen, especially on the slopes of Jebel Sobr near Taiz. It is uncertain whether the plant is indigenous, but if introduced into Yemen from Africa it came very early, with coffee, when the Abyssinian conquest caused the fall of the Himyarite empire. Perchance some savant will yet find kaat among the inscriptions on the temple at Mareb, and then there would be no doubt that the Queen of Sheba used it herself!

"Kaat is planted from shoots which are left to grow for three years, and then all the leaves and buds are pulled off except on a few twigs; these develop the following year into juicy shoots which are cut off, tied in bundles, wrapped in grass to preserve their moisture, and sold under the name of *Moubárreh*. The second crop is of better quality, and is called *Mouthanee*. A small bundle, *kilwet*, sells at Taiz for about 5 cents, and a larger quantity, yet scarcely a handful, called *zirbet*, for 10 cents. Only the leaves and young twigs are masticated, but I have seen the poor glad to pick up even the castaway dry leaves and branches to get what comfort they could out of them. The taste of the leaves is feebly bitter and astringent, very like that of the peach leaf. It has stimulative properties, produces wakefulness, in large quantities hallucination, is said to preserve the teeth, and some use it as an aphrodisiac. All Arabs claim that it gives wonderful power of endurance, and that with their kaat and tobacco they can do without food on long journeys. Every one, young or old, Arab, Jew or Turk, uses it, and many use it in incredible quantities. One soldier told me he spent a rupee a day for his kaat, and the Cadi of Taiz pays $20 a day for this luxury—*his* household, however, is as large as the Koran and divorce can make it.

"The Ottoman government receives 25 per cent. customs on the market price of the plant above the land tax on kaat culture. That the total revenue from this source is considerable can be judged from the fact that at Taiz, a town of perhaps five thousand population, *all* the other taxes are farmed for ten thousand dollars per annum, while the daily sale of kaat amounts to over three hundred dollars!

"Directly opposite my lodging at Taiz was the kaat market, open from early morning, when the fresh bundles came on donkeys and camels, but busiest in the afternoon, for the proper thing is to eat kaat just before sunset, and to invite your guest to chew leaves an hour or two before dinner. The sellers sit in the open air and are mostly women. In their rather picturesque costume, unveiled, (none of the peasants wear veils in Yemen,) they sit the long day, with a basket of the green luxury before them. Sprinkling their ware from time to time to keep it moist; untying a score of bundles to satisfy some proud epicure who tastes before he takes; haggling over the price of a damaged bundle with some soldier; and again swearing as only Arabs can to the genuineness of the kind in question, for kaat has six distinct flavors and varieties, each with a special name, and alas for the slave who was sent for 'Java' and returns with 'Mocha.'"

SOCIETY PROCEEDINGS.

Chicago Academy of Medicine.

[Reported exclusively for the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.]

(*Continued from page 688.*)

UTERO-OVARIAN RELATIONS OF EPILEPSY.

DR. THOMAS J. WATKINS—Text-books on nervous diseases say but little in relation to pelvic disease as a cause of epilepsy, although most of them mention pelvic disease as an occasional etiologic factor. Treatises on gynecology seem to avoid the consideration of the symptom which we are discussing. Epileptic convulsions may be divided into idiopathic, reflex and hysteroid or hystero-epileptic. The two latter alone interest the gynecologist. Many authors, among them Charcot, Dana and Gowers do not believe hystero-epilepsy to be epilepsy, but hysteria. William A. Hammond inclines to the belief that it ought to be considered separately from either epilepsy or hysteria, Hysteroidal convulsions may occur in cases subject to attacks of true epilepsy and *vice versa*. It is usually possible to differentiate between true epileptic and hysteroidal convulsions. Hysteroidal convulsions are of rare occurrence in this country and one seldom meets cases of reflex epilepsy, utero-ovarian in origin. The pelvic conditions which cause epileptic convulsions may be physiologic or pathologic. The physiologic are puberty, menopause, pregnancy and menstruation. The pathologic are disease of the uterus or its appendages. The convulsions may comprise a part or all of the features of true epilepsy. The aura is usually present and often consists of a pain starting from one or both ovaries. Pressure over the ovaries will frequently produce convulsions, and a seizure may often be checked by the same process.

Treatment.—When the convulsions occur with puberty, relief may be obtained by general medication or by such measures as are necessary to establish regular normal menstruation. When occurring at the menopause, general remedial measures are also indicated. When the etiologic factor is pregnancy, the convulsions may be a result of a displaced uterus which will require the usual treatment for this condition. The pregnancy, however, may be normal and it may be necessary to produce an abortion to effect a cure. Dr. Geo. J. Engelmann relates a case of epilepsy occurring during pregnancy relieved by cauterization of the cervix uteri, but later it became necessary to produce abortion to cure the patient. She again became pregnant and the epileptic attacks returned, cauterization of the cervix uteri produced no effect and an abortion had to be induced. Convulsions occurring only at time of menstruation may be due to dysmenorrhea or to the nervous excitability which frequently accompanies this function of the uterus. Relief may be obtained by the employment of general remedies, or by the use of such local measures as may be indicated. Three cases have come under my observation where the uterine appendages were removed to stop menstruation; no relief followed in any of these cases.

Experience has demonstrated that removal of the uterine appendages is usually followed by an excitable condition of the patient at the time of each menstrual period, and this condition usually extends over two, three or more years. From limited observation and from theoretical considerations, it is my belief that removal of normal uterine appendages for relief of epileptic attacks which seem to be apparently dependent upon menstruation is an unjustifiable procedure.

Dr. Polk has recently reported a case in which hysteroid convulsions were limited to the menstrual periods. The uterus was retroverted and the ovaries prolapsed and adherent. He removed the uterus and its appendages with the hope of obviating the distressing symptoms which usually follow the artificially produced menopause. The time intervening since operation was too brief to judge of the ultimate

results. The treatment of convulsions due to, or associated with, utero-ovarian disease can be given in a few words. An epileptic should not be deprived of the treatment of any uterine disease from which she may be suffering, such as laceration of the cervix uteri, endometritis, dislocations, displacements, etc. Relief of these conditions is certain to improve her general health and so benefit the epilepsy, and a cure may result. Dr. Chester Morris, of Philadelphia, reports a case of hystero-epilepsy of fifteen years' duration. The patient had had 651 convulsions, but after the restoration of a retroflexed uterus a cure resulted. Dr. Engelmann relates a case of hystero-epilepsy relieved by treatment of endometritis and erosion of the cervix uteri. Dr. Engelmann believed that the great mass of the symptoms due to pelvic disease depend upon uterine changes and not upon disease of the ovaries. Dr. Grailly Hewitt is of the same opinion.

Epileptics afflicted with hydrosalpinx, pyosalpinx, ovarian abscess or ovarian cyst should receive the usual treatment for those conditions regardless of the epileptic convulsions.

Cases are on record where relief of such conditions has resulted in cure. Dr. H. Marion Sims reports seven cases of hystero-epilepsy cured by surgical treatment. Two patients had pathologic anteflexion of the uterus; after relief of the displacement perfect cure resulted. The other five patients suffered from cystic or prolapsed ovaries with enlarged Fallopian tubes and adhesions. In these cases the symptoms permanently disappeared after removal of the appendages. In the majority of Dr. Sims' patients the convulsions were not confined to the time of menstruation. Dr. T. Gaillard Thomas, Dr. Sims and Dr. Pollen have each reported three cases and Dr. Vander Veer six cases cured by removal of the uterine appendages. The improvement in the general condition of the diseased appendages will naturally benefit the epilepsy. It must be remembered, however, that epileptics are often improved like all neurotic patients by the mental effect of gynecologic patients; hence it is possible to value the operation itself too highly.

RHINOLOGIC RELATIONS OF EPILEPSY.

DR. HOMER M. THOMAS—The cases of epilepsy which are of nasal origin are exceedingly rare. If we have a case of epilepsy due to nasal obstruction, the condition would have to be an outgrowth of some specific disease or direct pressure which would produce irritation in the cerebral cortex. Hence if we have a swelling of the cavernous muscular plexus underlying the nasal mucosa, the trigeminal nerve being exposed to friction, this condition can be transmitted through the cerebral cortex, and we may have, through reflex irritation, epilepsy.

The literature of this subject, as far as it relates to rhinologic conditions as causative factors in producing epilepsy is exceedingly meager. As a general proposition, the cases can be classed under two general heads. First, those where there is the presence of a foreign body in the nasal passage, such as a shoe button, or bean or kernel of corn, which are quite frequently passed into the nasal passages by children during play or through curiosity, producing slight attacks simulating epilepsy, purely from the mechanical irritation. Again, we may have deviations of the septum in which there are true hypertrophies, septal excrescences or spurs which produce conditions simulating epilepsy from either mechanical irritation or pressure. In regard to the recorded cases, Hinsdale reports two cases of epilepsy cured by removal of a foreign body from the nose. The first case was a sailor 43 years old, and three months after the operation there had been no return of the fits. The second was a man, 51 years of age; but in this case the convulsions did not ensue until thirteen years after the trauma, and the relationship between cause and effect is therefore very vague. A third case was in a girl, 17 years of age, in whom was found a bean in the nose, which was removed, when the fits entirely ceased. It is not, however, stated for how long a time the patient was under observation.

E. H. Griffin, of New York, reports an interesting case of reflex epilepsy, in which the attacks occurred once or twice a week, accidentally and completely cured by the removal of a shoe-button forming the nucleus of a large rhinolith in the left cavity.

A case of petit mal, with concomitant asthma, is described by W. C. Ayres, of New Orleans, in which relief of septal and turbinate hypertrophies, seated far back, relieved all symptoms.

F. Kjellman reports two interesting cases. The first was that of a school-boy, 12 years of age, who had had spasms for two years, with inability to close the jaws, sometimes associated with momentary unconsciousness, which gradually increased in severity. There was found, upon nasal examination a spongy hypertrophy of the mucous membrane of the two inferior turbinated bones. The turbinates were cauterized, but a return of the trouble occurred after repeated cold baths during cold weather. Cauterization of the turbinated bones again caused the disappearance of the untoward symptoms, and the boy remained perfectly well. In this case there was a morbid dilatation of the cavernous vascular plexus underlying the nasal mucosa, through which condition the terminal filaments of the trigeminal nerve were exposed to friction, which condition of irritation was transmitted to the motor centers of the cerebral cortex, and resulting in epilepsy, tonic cramp and occasional loss of consciousness. The second was that of a boy aged 6 years. In the slighter attacks he had spasmodic movements in the left hand and arm, and asthma; in the severer attacks epileptic symptoms appeared, with loss of consciousness and clonic spasms. At the examination Kjellman discovered a moderate diffuse swelling, soft to the touch of a probe, on the right inferior turbinated. Cauterization was not followed by any amelioration of the symptoms. The boy had, for three years past, been addicted to the bad habit of sleeping with his thumb in his mouth, and closing, at the same time, the left nostril with the other fingers. Thus, nasal breathing was obstructed. This case seems, according to the author, to prove: 1, that epileptiform attacks of nasal origin are not always due to an irritation of the nasal ramifications of the trigeminal nerve; 2, that certain cases of so-called epilepsia nosturna are initiated by an asthmatic attack, and are essentially dependent upon obstructed nasal respiration.

My personal experience with cases of epilepsy in which there were nasal symptoms is confined to one case. A young lady from northern Michigan consulted me for well-defined epilepsy. After thoroughly examining the case, I sent her to my esteemed colleague, Dr. Brower, for the treatment of her epilepsy, while I looked after her nasal and throat relations in the case. This case was one of direct and central epilepsy, but in which there was a persistent chronic catarrh with hypertrophy over the turbinated bones. Cauterization of the surfaces produced some relief; at the same time the patient was taking large doses of the bromids, which I have no doubt had more direct influence on the disease than my local applications. In this case I observed that the prolonged use of the bromids tended to excite nasal inflammation—a Schneiderianitis, which is often a secondary result of the constitutional effect of the bromids, and in specific cases where it is combined with the iodids we get a still more marked inflammatory condition. The disease of epilepsy therefore, as an outgrowth of nasal disease, is rather indefinite and ill-defined except when due to the presence of foreign bodies in the nose, or of septal deviations, or from traumatic causes.

RELATION OF PATHOLOGIC CONDITIONS OF THE RECTUM AND ANUS TO EPILEPSY.

DR. JOSEPH B. BACON—Since it is an admitted fact that the sympathetic nervous system is a very important factor in epilepsy, it would seem that diseases of the rectum must call for careful consideration in the diagnosis and treatment of this neurotic condition. So abundant is the sympathetic nerve tissue supplied to the rectum that we might correctly speak of it as forming one of the layers composing the rectal walls. Another anatomic fact is that at the anal end of the rectum there is an equal excess of spinal nervous tissue, composing an intimate anastomosing of branches of the third, fourth and fifth pairs of sacral nerves, together with the small sciatics. When a part of the body is thus supplied with this unusual amount of vasomotor and sensory nerve tissue, we must expect serious reflex disturbances if that organ becomes the seat of disease.

It is a well-known fact that the reflex centers of the rectum are the last to yield to narcosis, coma or the allied states. It is hence easily irritated and such irritation, if continuous, in cases having an unstable nervous equilibrium could set up and maintain an epileptic habit.

In cases of auto-intoxication, a condition frequently found in epilepsy, hepatic derangement occurs and resulting in portal congestion causes hemorrhoids, hence an epileptic hemorrhoidal state occurs and often precedes the epileptic onset. In all such cases an examination of the rectum is necessary and of value.

When the epileptic habit is once established, any exciting cause will tend to keep up the condition; such as vitiated blood, uterine disease, inadequate elimination from the kidneys, etc., causes which frequently are produced from diseases

of the rectum. Impacted feces, irritable hemorrhoids or ulcer, fistulæ, all excite the sympathetic nerves of the rectum; the irritation is carried over the whole system, but especially to the uterus, kidneys and liver. This irritation in the rectum causes a vasomotor disturbance in the kidney, for that organ is almost exclusively supplied with sympathetic nerves; as a result a decreased amount of urine is eliminated, the blood is thus vitiated and causes an irritable condition sufficient to excite the epileptic habit to a renewed attack. Again, the rectal irritation after being reflected to the solar plexus, takes the channel of least resistance and expends its force in producing a vasomotor disturbance of the uterus, a condition frequently observed from rectal disease. Thus the uterus, if primarily the cause of an epileptic habit, is again excited sufficiently to become the reflex center and act as the cause of renewing or continuing the epileptic status.

Much more could be said concerning the rectum from the standpoint of spinal nerve irritations and reflexes. While it is necessary to speak of recto-anal diseases as causes of reflex disturbances, with care, on account of the great amount of abuse and quackery going on at present under the guidance of men who work only for financial gain, yet there is and has for a long time been sufficient exact knowledge concerning the reflex centers of this organ to justify us in claiming that in all cases of epilepsy, if pathologic conditions are found in the rectum they should be if possible removed.

AUTO-INTOXICATION RELATIONS OF EPILEPSY.

Dr. W. A. Evans—The discussion that has preceded what I have to say is conclusive evidence that there is something more to epilepsy than the exciting factors which the various speakers have emphasized. That conditions so diverse and so far removed from each other can produce the same train of symptoms and the same effects can follow treatments so diverse is proof positive that there is a common underlying condition. It is a well recognized fact that every body produces substances that are suicidal or destructive to it. It is a well recognized fact, also, that the human body is no exception to this rule. It is equally a recognized fact that the great eliminative organ of the body is the kidney, and the great eliminative product is the urine. Human urine is toxic under circumstances that can be most accurately computed. Normal urine is toxic. Pathologic urine is likewise toxic. Pathologic urine is frequently less toxic than is normal urine. The morning's urine varies in its toxic properties from that of the night. The urine passed during the night time possesses a preponderance of principle that is convulsive. The urine passed during the day time possesses a preponderance of principle that produces or tends to produce coma. There are several physiologic effects of urine. It depresses temperature; it causes salivation; it causes contraction of the pupil; diuresis; a condition of coma, and a condition of convulsion. These conditions are frequently antidotal each to the other. You can readily understand that the urine containing that principle which causes convulsions can have it greatly modified or curtailed by the presence of the principle which causes coma, and *vice versa*. As a consequence, the amount of effect which we get from the night's urine in the one direction of convulsion is much greater than the amount of effect in the direction of convulsion which we get from twenty-four hours urine. The nature of these various substances are complicated. The substance that we have particularly under consideration to-night is the convulsive, which is perhaps a compound of an inorganic substance, probably a potassium salt, and an organic substance whose nature has not yet been determined.

Fêré, in 1890, claimed that he had isolated from the urine a toxin which was purely a convulsive product, and always present in the urine of epileptics. This observation has been confirmed by Raymond and Voisin. Bouchard, to whom the greatest credit is due, has proven the presence of a convulsive agent or agents, but he does not hold that the agency producing epilepsy varies from those present under ordinary circumstances except in degree. A number of observers in this country have extracted from the urine of epileptics an increased amount of the aromatic sulphates, skatol, phenol and indol. They are combinations whose original factors are the products of putrefaction, particularly and not exclusively in the intestinal tract. The observations of these men go to show that there is no one toxin which produces convulsions and which stands in a causative relation towards the convulsions that we term epilepsy, but that in this condition there is an *accumulation* within the system of the toxins which exist there more or less constantly—so constantly that under our conditions of health we must always call them normal. It has seemed to me that epilepsy is not an entity; that epilepsy is not a disease, but that it is an expression of conditions. The fundamental condition which should overshadow every other is an accumulation within the body of the products of tissue change which should have been eliminated by some of the excretory organs. We know very well that the organ which should eliminate them is the kidney, but we remember further that their production lies beyond the kidney; that the kidney stands in simply an eliminative relation; beyond that, there are areas which stand in a productive relation; the blood itself, the nervous system, liver and spleen, the muscles and other organs;—and perhaps especially with us, the products of putrefaction within the intestinal tract. Putrefactive products are convulsive. In epilepsy there is this condition of affairs: An accumulation in the system of excrementory products poises the organism so delicately that some factor hitherto perhaps not of great importance pushes it over and a cataclysm results. Migraine furnishes a minor parallel, a neuralgia due to an accumulation within the body of products which the kidneys should have eliminated. The urine preceding, during and succeeding an attack is similar to that of the same stages of epilepsy. There is a condition of vasomotor spasm similar to that constituting some of the minor forms of epilepsy.

It is well to bear in mind the fact that, if we are examining for the toxins that are productive of any condition, that they may not be found in the urine prior to the attack in great quantity. The increase of toxin production may be followed by either a decrease or an increase of toxin excretion. But that the increase of production is always in excess of the increase of excretion. It is probable, however, that increased production and decreased excretion seldom go hand in hand for protracted periods, for the results would not be compatible with life. A side-light is thrown by the dramatic picture history of chill in which there is an increased production and a decreased excretion of heat. We must bear in mind, also, that the urine of an attack and the urine following an attack may not give us a toxin in the form in which it circulates in the blood, for the condition of affairs that constitutes an attack represents its partial destruction on the part of the nervous system. A chemic change in the product bringing about the condition of affairs that we know as an epileptic attack. An epileptic attack is followed by the emission of a large quantity of very pale urine which may contain an increased amount of the toxin, but it is more probable that it contains an increased amount of the derivatives of the toxin. I have examined urine within the last few weeks from an epileptic boy, and the following was the condition of affairs: The boy weighed 110 pounds. He was passing in twenty-four hours 270 cubic centimeters of urine, with a specific gravity of 1031; total solids for twenty-four hours, 255 grains. Amount of urea for twenty-four hours 136 grains. There was a very marked increase of the aromatic sulphates. This urine was not taken at the time of the attack, nor immediately after, but it was taken in the interim. There was an especially marked increase of indican. It seemed clear that the boy had a condition of intestinal putrefaction, that his albuminoid foods were not being digested, but were being broken down, putrefying in the intestinal tract; absorption was taking place faster than his kidneys were able to eliminate. At first there was a slight accumulation, after awhile there was such a soaking of his system that it was ready to be pushed over by any factor such as eye-strain, nasal or rectal trouble, or whatever path of conduction in that particular boy might be most out of balance.

In conclusion, permit me to offer the following: Epilepsy is not an entity. Most of the cases are fundamentally due to retention within the body of a toxin or toxins whose most marked characteristic is irritativeness to motor nerve areas. During the interim the excretion of this toxin may be increased or decreased. During the paroxysm and immediately subsequent thereto there is at first an enormous excretion of these substances mostly as ash, and then an enormous production of a narcotic substance which is antidotal to the first cause. The increase in production is most often in the intestinal tract. When saturation has taken place by the excess of addition over subtraction, any added irritation may make the first fulminant.

There are cases in which there is so nearly a balance between addition and subtraction that an occasional "vicarious" diuresis or diarrhea would "strike a balance" were the added factor of a pressure on nerve filaments, in nose or rectum, or elsewhere removed.

SURGICAL RELATIONS OF EPILEPSY.

Dr. G. Frank Lydston—Perhaps it is incumbent upon me

to apologize for the paucity of results from the application of various surgical measures in the treatment of epilepsy, and not for our surgical resources, for they are multitudinous. It must be confessed that surgery has accomplished very little in idiopathic epilepsy. I suppose that it would be a fair proposition to say that it is almost time for us to abandon operative measures in this form of the disease. It is unquestionably a fact that most of the brilliant cures reported have relapsed, and that very indefinite results have been obtained from surgical operations in this type of the disease. Anesthesia and the effect of shock probably temporarily inhibit the abnormal cell action characteristic of epilepsy. A brisk spanking might do the same. If the theory of the relation of toxins to epilepsy be right, it is easy to understand the failure of operative procedures in epilepsy of idiopathic or central origin. As far as epilepsy of reflex origin is concerned, it is unquestionably true that operative measures applied sufficiently early—and by that I mean prior to the time when permanent changes in the structure and biochemism of the cerebral cells have occurred—are not only indicated but are likely to bring about excellent results. But even in these cases the effects are in a large proportion of cases only temporary. Nearly every man who has operated for the removal of the supposed reflex cause of the disease, has reported the case so speedily after the operation that most of the recorded cases are valueless. The statistics of operative results in epilepsy in my estimation are about as nearly worthless as any statistics that could be mentioned. You will observe that I am not offering any enthusiastic arguments in favor of surgical interference. Operation in some of these so-called reflex cases undoubtedly temporarily inhibits the morbid cell activity, or whatever you choose to call it, that underlies the manifestations of epilepsy, whatever the source of irritation may be. In some cases of reflex neurosis, we have this temporary inhibition of the epileptic phenomena, and from that the conclusion is arrived at that the supposed source of reflex irritation is really the cause of the disease, when it was merely a coincidence. These coincidences in my opinion explain most of the relapses following apparent cures or temporary relief by operation on the sources of alleged reflex irritation.

Regarding the failure of surgical operations for various forms of reflex neuroses, perhaps it would not be out of place to state that the more brilliant results I have in my operative experience, the more skeptical I become after observing these cases. I remember two cases in point as showing how in reflex neuroses we are very apt to form erroneous opinions. One of these cases my friend Dr. Moyer saw with me. It was one of apparent incipient paraplegia in a young child in which I detected the undoubted cause in an extremely adherent prepuce and phimosis. The suspicion in my mind at the time was that there might be incipient tubercular disease of the spine. The improvement which followed the operation was as marked as one could wish. About three months later the patient had definite signs of disease of the spinal column. I referred the case to Dr. Moyer for consultation, and he confirmed my diagnosis.

This case while perhaps not exactly akin to epilepsy, is germane to the question of reflex neuroses in general. It is probable that epilepsy, when of idiopathic or central origin, depends on varying conditions of the brain and perhaps of the spinal cord. This, in combination with the difficulty of cerebral localization, is perhaps responsible for a great many of our surgical failures. It is true that we find in some cases circumscribed changes that are very marked; but in others, although there is a distinct focus, the pathologic condition is not easy to define even when the brain is exposed by operation. It was Van Gieson, I think, who suggested that an expert microscopist should be present in all operations for epilepsy, in order that a correct diagnosis might be made on the spot. This suggestion is not a practical one perhaps, but it illustrates the difficulty of cerebral localization in these particular cases. While an operation may be done for the removal of the diseased focus, the influence of the morbid process is often so far beyond reach that operation fails. In some of these cases there is a distinct pathologic condition of the cerebral cortex, and the relapse or recurrence after the removal of the condition is usually attributed to the formation of the cicatrix which every one present knows is capable of perpetuating a similar condition of irritation to that produced by the original focus. We know that in certain cases in which epilepsy is due to intracranial conditions, such as internal exostosis, localized pachymeningitis, subdural cysts, and tumors of various kinds, relapse often occurs after the removal of what was undoubtedly the original focus of irritation. This shows plainly that whatever the source of irritation may be, a profound morbid influence upon the cerebral cortex may remain after the removal of the original exciting cause. The most curable variety of epilepsy is the syphilitic form; when I say the most curable variety, I mean when it is taken sufficiently early. We may, however, remove by proper treatment all evidences of syphilis, and still after a certain length of time epilepsy goes on as if no treatment had been instituted. The results are very little better than we have in the ordinary idiopathic or central form of the disease. A gumma of the brain, which it is reasonable to suppose was the origin of the epilepsy, may have been removed and yet the epilepsy may continue. This, I think, is a fair illustration of the limitations of cerebral surgery in epilepsy.

The relations between the various cerebral centers and ganglia and peripheral muscles are not easily established, but we do know that disease of the cerebral centers will bring about epileptiform referable to the muscles; the exact manner in which it is brought about we do not know. We are apt to be guided in our clinical and surgical deductions for operative interference by the most prominent phenomena that are first observed. The removal of the diseased focus may be ignored, in view of the fact that the initial symptoms described by the patient or observed by the physician may be indicative of disturbance of the center of one or the other extremity. This may lead to erroneous deductions, and a wrong cerebral focus may be excised.

A very interesting field, showing that we are not strictly limited to operative measures in these cases, was recently read by Professor Hadra, of Galveston, Texas, before the Southern Surgical and Gynecological Association. He had been using electricity for the purpose of localization of the focus of irritation, after the removal of a greater or less area of the skull. His observations led him to conclude that the repeated application of the electric current to the diseased focus was likely to be beneficial. He does not say that he has obtained any very striking results; but from a careful perusal of his paper I am inclined to think that the treatment he recommends is at least worthy of further experimentation and trial.

The most fruitful field for surgery in the treatment of epilepsy is its early application in cases of traumatic origin. It is unfortunate, however, that in most cases of traumatic origin the epilepsy does not come on until very late, and by that time certain conditions have arisen which render operation for the removal of the original focus of irritation practically useless. So that if operation in cases of traumatic epilepsy is to be of any value, whatever, it should be done very early. Cases have been reported in which encouraging results have been had, but the principal deduction from the results of the operations is that operative surgery, as far as traumatic epilepsy is concerned, should be chiefly prophylactic. I firmly believe that a great many cases of head injury, followed by epilepsy later in life, might have been prevented by an early operation. I know many physicians who condemn interference with the cranium, unless it is an adult, because of the notion that the young skull is elastic and the brain able to tolerate almost anything short of being run over by the wheels of a locomotive. Nature is therefore relied upon. Particularly is this true where there are no pronounced symptoms of compression. I believe this conservatism is carried too far. I believe that in many cases, even without distinct depression of the skull, epilepsy will develop later on as a consequence of localized pachymeningitis, with or without sclerotic changes in the cerebral cortex. Even when there is no depression, a clot may form which may subsequently undergo transformation into a cyst and produce epilepsy. Spiculæ of bone may be driven down upon the brain without serious evidences of injury to the cranium. I believe if more radical surgery was done in head injuries, it would be the means of preventing a great many cases of traumatic epilepsy. With regard to the technique of the operation for epilepsy, the suggestion of Victor Horsley, of operating in two stages is a wise one. Here we expose the brain and tamponade with iodoform gauze. It would seem from the history of the cases reported, in which this method has been followed, that the brain tolerates the pressure of the gauze for a day or two very nicely.

I have here a photograph which was sent to me by my friend, Dr. Bernays, of a case of focal epilepsy involving the right arm in which I saw him remove the thumb, wrist and part of the arm centers. It was as good a demonstration as I have ever seen, both with respect to the focus of irritation and its effect upon the arm, wrist and hand, and also with reference to the effect on the boy after the operation

was completed. There was a history of slight traumatism and there was a small area of thickening of the cerebral cortex which was removed, involving the centers I have just mentioned. As the patient came out from under the anesthetic he struggled vigorously with all his muscles, with the exception of this member, and that remained perfectly helpless. If an exchange of paralysis for the focal epilepsy was fair, the boy was improved, but the remote results I have not heard. (Here Dr. Lydston passed around a photograph of the boy.)

In conclusion, I will state we have great reason to hope that the therapeutics of epilepsy will be greatly improved, but frankly, I do not believe there is much hope of improvement in the direction of operative measures for the relief of this disease. I am sorry to state this as my conviction, but I believe it is logical.

LARYNGOLOGIC RELATIONS OF EPILEPSY.

DR. EDWARD T. DICKERMAN—Not having any personal experience with this rare form of the disease, I depend entirely upon the literature of the subject. What rôle does the larynx play in epilepsy? This question must be answered under two heads: 1, the part the larynx takes in an attack of epilepsy; 2, the part it plays as an etiologic factor.

Under the first division I will say little, merely mentioning the tickling and burning in the larynx which is often experienced during the aura or prodromal symptoms. The characteristic cry or groan, caused by air being forced through the spasmodically contracted larynx, this spasm of the glottis often causing a sense of distress or choking. During the attack, when vomiting occurs, there is danger of foreign matter entering the larynx, while in an insensible state, choking the patient and sometimes causing death. Following an attack we may have loss of voice for a time, due to the general nervous discharge, inhibiting probably the higher centers of the brain.

Under the second head, What rôle does the larynx play as an etiologic factor, much has been said and little really known. In 1876 Charcot described a case with about the following symptoms: A man in good health is suddenly attacked with tickling and burning in the throat, accompanied by more or less coughing, some dizziness, and falls to the floor unconscious. This lasts from a few seconds to a minute, when consciousness returns without any mental or physical disturbance. This train of symptoms Charcot describes under the name of laryngeal vertigo, and advances the theory that it is analogous to Ménière's disease, and that the superior laryngeal is the centripetal nerve affected. How so clear and acute an observer as Charcot could distinguish a similarity to the distressing symptoms of aural vertigo, with its well-defined symptoms, is not known. Up to date, twenty-one cases have been reported, all but one being males, with an average age of 50 years. Gray reports a case, with a careful *résumé* of the subject, and finding in one of Charcot's cases as well as his own, muscular twitching or spasm, comes to the conclusion that the disease is epileptic in character, and describes it as laryngeal epilepsy.

McBride considers the disease, or at least the loss of consciousness due to a complete spasm of the glottis, causes an increased air pressure in the alveoli of the lungs, preventing the circulation, or interchange of blood in the capillaries, therefore less blood in the left side of the heart. The spasm in the neck and thorax, retarding the blood in the veins, causes a cerebral venous hyperemia, and an arterial ischemia, and thus produces unconsciousness by the disturbance of the blood supply to the higher centers of the brain. McBride cites the well-known experiments of Weber, who with contracted larynx and forced expiration, was able to produce decreased action of the heart, unconsciousness and slight muscular twitching. McBride's experiments were on the same line, with the exception that he used the sphygmograph and found that the ascending line of the tracing was much diminished. This theory, although plausible, does not explain why in tabetic crises and other forms of severe laryngeal spasms, we do not have the same result.

Cases have been reported by Gasquet, Krishaber, Lefferts, McBride, Russell, Massee, Knight, Gleitsmann, Dauvan, Lennox Brown, Armstrong, Phillips and Adler, twenty-one in all. Of these, twenty were males, with an average age of 50 years.

Unfortunately, the histories of these cases have not been complete, especially in regard to the nervous history and condition of the patient. Two or three cases, I think, can be thrown out, being cases of syncope due to the violence of the cough, these cases never having another attack. In the majority of the cases, prodromata or tickling or burning in the larynx were present. In ten cases cough was slight. In two cases cough was spasmodic. Three cases had severe attacks of coughing. In eleven cases no confusion after an attack; one case experienced slight confusion. In four cases congestion of head and face was noted. Spasm of the glottis is recorded in about half the cases. All cases are reported cured by some laryngeal or pharyngeal treatment, either operative or medical.

From the above cited symptoms what deduction can be made? We know that with the epileptic habit present we can have a laryngeal reflex epilepsy, as in the well-known case reported by Summerbrod, in which there was a pronounced epilepsy due to an intra-laryngeal tumor, the attacks ceasing on the removal of the tumor. But here the epileptic habit was established, he having had attacks before which ceased on the removal of a scar from his hand.

1. Given, therefore, the presence of the epileptic habit, we may have epilepsy due to laryngeal irritation.

2. The above cited cases present the cardinal symptoms of the petit mal from the epilepsy that is unconscious with or without muscular spasm.

3. Although the symptoms of epilepsy were cured, the subsequent history is necessary to learn whether the habit remains.

PEDIATRIC RELATIONS OF EPILEPSY.

DR. ROSA ENGELMANN—Epilepsy in its pediatric relations resolves itself into a question of responsibility. The pediatrician is the first consulted relative to eclampsia, one of the most frequent disorders of infancy, childhood and youth. It necessitates great diagnostic acumen to differentiate, and accept or reject, the etiologic factors of this symptom. Chronic organic and acute cerebral and spinal diseases first pass in review. Next comes the functional neuroses from reflex irritations. This category includes the hematogenous auto-intoxications and infections of the chronic and acute general diseases, such as rickets, tuberculosis, syphilis, malaria, scarlatina, diphtheria, pertussis, etc., as well as the ordinarily described excitants, such as colic, teething, worms etc. But even the elimination of these etiologic factors is not decisive, since any one or several of them may become the starting point of a subsequent epileptic cycle.

Youthful nervous tissue from its very immaturity and consequent instability conduces to this deplorable result. Hence the recurrence and the formation of a convulsive habit must be guarded against; for the border line between apparently harmless infantile convulsive attacks and early epileptic attacks is hardly demonstrable. Moreover, the danger of the one developing into the other is imminent. The importance of the early recognition of epilepsy is made evident by Gower's statistics. He states that 5.5 per cent. of epileptic cases develop in the first year, and 12.5 per cent. between the first and fourth years, and that one-fourth of the total number of attacks begin before the tenth year of life. Thus early life, endowed with a mobile and impressionable nervous organization, and subject to constant or repeated reflex irritations, inductive of habit formation is a determinative element in the production of epilepsy.

COLONY TREATMENT OF EPILEPSY.

DR. H. C. B. ALEXANDER—Every defective class has been specialized as to philanthropic treatment with one most unfortunate, most afflicted exception—the epileptic. As Dr. Ewart remarks, they alone have been left to work out their own salvation. Often outcasts from the family, thrust out from the schools, shunned by fellows, refused industrial employment, left to idleness and ignorance, friendless, and drifting at last most likely to the workhouse. They are "not so much born into this world as damned into it." What is to be done with them? The civilized world would cry out if it were proposed to place them in a lethal chamber, but after all would it not be more merciful to kill them thus, instead of allowing them to live from day to day a life of misery and despair? If we grasp the central truth that the child is father to the man, we are masters of the future. The impressions and surroundings of childhood mold character. The slums, the alleys, the evil example of parents, the surroundings of dirt, sloth, idleness and dissipation, the absence of restraint, the want of religious and educational influence are responsible for crime and criminals. Collectively and individually the responsibility rests upon man—he can not shelve it by throwing the blame on heredity. It is for the public to cast an ægis over childhood, and fully to accept the debt and responsibility due to epileptic children. As a good many of these unfortunates are as bright, intelligent, capable of being educated, as well adapted for industrial pursuits as ordinary human beings, the injustice to the

epileptic locked up with the insane becomes apparent. What they require is industrial training combined with medical supervision.

Movements for this much neglected class began with classification of patients in insane hospitals. As these grew in size and the cottage system was adopted, the possibility of separate colonies for epileptics became apparent.

Over forty years ago a clergyman, Mr. Bodt, established a colony at La Force near Lyons, France, which is still in a flourishing state and doing excellent work. A more extensive experiment was made in Germany about twenty-four years ago. Pastor von Bodelschwingle, a Lutheran clergyman, advocated a refuge where these sufferers might be cured, if curable; where they might have a comfortable home if recovery were impossible; where they could develop their mental faculties in the highest degree by acquiring trades or taking part in whatever occupations they might select, finally developing into a community of educated, industrious and contented citizens. He purchased a farm near Bielefeld (Westphalia), and with four epileptics established a colony which gradually expanded. In 1878 it contained 250 epileptics; in 1882, 565, and at the present time considerably over 1,100. During this period 2,407 have been received, and of these 156 recovered, and 450 improved. The colony with its gardens, farms, and cottages is scattered over 320 acres of beautiful woodland and meadows. The chief features in the management are the system of decentralization, the division of the patients, as much as is possible, into small families residing in cottages, the separation of the sexes and of the feeble-minded from those whose mental faculties are more or less normal. To secure a sufficient number of male and female nurses, training schools have been established. The authorities not only have a supply for their own use, but are enabled to send them to distant places.

Making and repairing wearing apparel, knitting fancy work, the laundry, etc., furnish employment for the women, who are also to be seen attending to the gardens. Men have a greater variety of occupation; the printing establishment, book-binding, illuminating picture cards, floriculture, agriculture and fruit raising. There are also a bakery, foundry, tailor and boot shops, dairy and brick-yard. In all, there are over thirty different callings which employ many hands. An orchestra is made up from their own ranks. There is everything to distract the minds of the patients. Every workshop has its mattress ready for use, and there are plenty of willing hands always about to help those who may happen to have a fit. The colony is a hospital for the use of epileptics, and a school for the education of epileptic children, an industrial institute for the adults, and an asylum for those who become insane. The Countess of Meath, speaking of a visit to these colonies, remarks: "Though the men do occasionally hurt themselves in falling, they do not seem to suffer more serious injuries in these workshops, where dangerous tools are about, than if they were employed in an occupation not necessitating their use. And what a blessing must employment be to these poor fellows, giving them the means of forgetting their afflictions and making them realize that they are able to take part in the work going on in the world."

Since the successful establishment of this colony, several similar institutions for epileptics have sprung into existence on the continent. Among these are Rotenburg in Hanover; Maria Hilb near Munster, and Olpe in Westphalia; Alexandra-Kloster at Aix-la-Chapelle, and Rath near Dusseldsdorf for the Rhenish Province; Neinsted-Thale for Saxony; Tabor near Stettin for Pomerania and Posen; Karlshof near Rastenburg for East and West Prussia; Potsdam for Brandenburg; Haarlem in Holland and Zurich in Switzerland. As might have been anticipated from the altruistic peculiarities of epileptics in insane hospitals, it has been found in these colonies that no harm is done by bringing epileptics into contact with each other. They feel on an equality with their fellows in such a place, losing that sense of isolation and singularity which they can not but observe in the ordinary world as separating them from the rest of mankind. They enjoy caring for each other and being kind and helpful to their fellow sufferers. It has been noted also that the number of seizures almost always diminishes upon entering the new, hopeful, encouraging life together by the busy community.

The movement for epileptic colonization began in the United States in Ohio. At Dr. Peterson's suggestion, Gallipolis was selected. The buildings unfortunately are grouped too closely to subserve best the purposes of an epileptic colony. In California, buildings for the epileptics have been erected in the grounds of the Home for Feeble-Minded. A law was passed by the Legislature making the State Board of Charities, a commission, to select a site and prepare plans for an institution for epileptics. The law was authoritative in requiring the tract of land secured for the purpose to be 400 acres or more in extent. The whole scheme of building to be arranged on the colony or village plan. It will receive patients next spring.

In Massachusetts there was opened, in 1882, the Hospital Cottages for Children, at Baldwinsville. The institution was first organized as a private charity, but is now governed by five trustees appointed by the Governor and fourteen appointed by the corporation. It has been liberally aided by the State. Children under 14 years of age are admitted who are suffering from epileptic or epileptiform seizures; children suffering from nervous disorders, not feeble-minded; children with deformities, diseases of the joints and infantile paralysis; also those needing surgical operations and fitting supports. Sept. 30, 1893, the hospital contained 103 children. The whole number treated during the fifteen previous months was 170, about two-thirds of whom were epileptics.

In Pennsylvania the Elwyn Training School for Feeble-Minded has two buildings for epileptic boys and girls. The Church of St. Clements, Philadelphia, has a small hospital for sane epileptics. The Michigan Legislature has passed a law for training epileptics in separate buildings on the cottage plan. The Minnesota Training School for Feeble-Minded has established an epileptic department with special supervisory care. The King's Daughters of Baltimore, Md., have purchased a small farm and are attempting to establish an epileptic colony. Next to Ohio, New York has manifested most interest in epileptics. New York City long had a special hospital for epileptics and paralytics, and the creation of a State hospital had been urged for nearly twenty years when, in 1891, a law passed for the purpose but was vetoed by the Governor in 1893.

The proportion of epileptics to the general population is about 1 to 650. These figures are, however, merely approximate, but they are under rather than over the mark. If, as justice to an afflicted class and to the community demands, provision be made for this class in Illinois, whose self-respect requires that it lag not behind Ohio and New York, then the estimates should be made on a basis of 2 in 1,000 as a beginning.

The main principles to be observed in the organization of such a colony are, as Drs. Peterson and Ewart have shown,—land, to consist of at least 500 acres, adapted to agriculture and horticulture. This land should be within easy access of a large city, giving a ready market for produce; three small buildings, to be arranged into separate divisions for the male and female patients, each of these divisions to make provision in separate cottages for the insane, the convalescents, the school children, the workers and private patients of the higher classes; every patient, without exception, should be under medical care and there should be a medical man for every 200 patients; an educational building for epileptic children; workshop for adult epileptics, farm buildings, dairy, etc., and a special laboratory for the study of epilepsy by a skilled pathologist.

(To be continued.)

Oleomargarine in the Navy.—In New York, the State Department of Agriculture has supervision of the sale of oleomargarine. A prosecution of a grocer of Brooklyn recently occurred under circumstances going to show that the sailors of the United States Navy regard oleomargarine with favor, as an article of diet. The statement was made in court that so long as this substance looks like butter and does not become rancid the sailors make no inquiry into its origin. He has found that it keeps better in torrid climes, and very few warships go out of port for any southward cruise without a large stock of the imitation butter. While any person may legally keep and sell this substance, if it is labeled and known to be oleomargarine, it is unlawful to sell it as butter. This is State law, and not Federal law. There is no United States law against this sale. Accordingly the defense was entered for the accused grocer that his sales were made in the navy-yard and not in the State of New York. It so happened that the particular sale, in which the grocer was detected by the agents of the State Department, was to fill an order for oleomargarine that he had received from the navy-yard.

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MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Henry P. Newman, Venetian Building, Chicago, Ill., sending him a certificate or statement that the applicant is in good standing in his own Society, signed by the President and Secretary of said Society. Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership.

On receipt of the subscription the weekly JOURNAL of the Association will be forwarded regularly.

Gentlemen already members of the Association should send their annual subscription to the Treasurer, or direct to the JOURNAL office.

All communications and manuscript of whatever character, intended for publication in the JOURNAL, should be addressed to the *Editor*, and all communications relative to the business of the JOURNAL, proof sheets returned, or in regard to subscriptions, should be addressed to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 86 Fifth Avenue, Chicago.

SATURDAY, NOVEMBER 10, 1894.

DIET OF THE PAUPER INSANE OF NEW YORK CITY.

DR. AUSTIN FLINT recently testified before an investigating commission in New York, regarding the relative dietaries of hospitals, asylums and correctional institutions. From 1867 he has been a real or nominal consultant as to the dietaries to the Commissioners of Charities. He testified that he was not called upon very frequently to give advice, and in fact could not name the year of, or occasion for, his last consultation in this capacity. He further testified that his advice was not always followed; for example, the diet tables prepared by him for the insane were not put in use, but the Commissioners, in their wisdom, saw fit to adopt for these dements the tables that had been intended for criminals and workhouse people. The tables, as framed by him, would have given the insane the same dietary as had been arranged for the sick in the hospitals. And he explained his principle of action in this regard in this manner: He felt that a discrimination should be made in favor of the lunatics and the sick, they having been guilty of no crime, so that they should be allowed more food, in these tables, to keep them in the best condition possible, while the criminals were entitled to only such diet as would keep them in a fair condition of physique.

DR. FLINT condemned the use of coffee mixed with chicory, and the boiling of tea for an hour or more could only spoil a good article. He condemned the use of molasses and found that the quantities of butter and fish—three-quarters of an ounce of the former at breakfast and supper, and eight ounces of the latter—were altogether too limited. The quantities of certain important articles, as eggs, butter, fish, were in the city institutions below those in the tables supplied to the State hospitals for the insane. From this, and other testimony, the discriminations against the city insane have been brought into view. There has been, even, a favoritism displayed toward the criminal dement. The criminal insane of New York City, who are consigned to the State Asylum at Matteawan, have an allowance of $3.75 per week; while the city charges, guilty of no crime, receive only $2.73 per week, taking the average of five years. Under the State Commission, no such discrimination is made between the pauper and criminal lunatics, and this has been one of the fortunate results brought about by the legislation of the last three years. The insane of the State of New York have been benefited by the principle of "State care," and New York County may come in under its provisions so soon as the politicians can be induced, or compelled, to relax their hold on the throat of the pauper dement.

A NEW FIELD FOR THE COLLEGE.

The remarkably healthful season of 1894 has given the average doctor plenty of leisure in which to ponder many things. Among them none, probably, has received more attention than the fact that the struggle for medical existence is, year by year, growing sharper and more strenuous. Whether it be that people are becoming more healthy or that the supply of doctors is excessive, the fact remains; and, in either case or both, any new avenue to increased usefulness and consequent increased income must be welcome.

Such an avenue seems to offer in the present period of development of our public health services—National, State, municipal and rural. The amount of work these services already accomplish, even in their relatively inchoate condition, and their beneficial effect upon the public health, can not be over-estimated; indeed, it is not at all unlikely that to their efforts is due some considerable share of the lessening demand for the doctor's services. There is, too, the further consideration that the average practicing physician does, in the aggregate, a vast amount of volunteer sanitary work for which he not only receives no compensation but which, *pro tanto*, reduces his paying practice. To the extent that all this is true there would be a practical as well as poetic justice in securing for the physician a fair proportion of the amount the community saves by being kept well, through improved sanitary conditions and the efforts of preventive medicine, over and above the sum which would otherwise be paid for being treated when sick with preventable disease.

The present outlook offers no immediate remedy for this anomaly—an anomaly which is peculiar to the medical profession whose members after having qualified themselves by years of expensive study for

the treatment of disease, voluntarily and without pecuniary recompense exert themselves to limit and prevent disease. The logic of the situation, however, points to a near future in which the forces of preventive medicine, sanitary administration and public hygiene shall be organized so effectively as to compel recognition by the Nation, the State and the community, and so secure adequate compensation for services now but poorly paid for or wholly unrewarded. As a step to this consummation, the JOURNAL offers for the consideration of the Medical Colleges of the country, the suggestion that the degree of Doctor of Public Health, or its equivalent, be instituted and that provision be made by them for the necessary course of instruction.

Such a degree was first established by the University of Dublin in 1871, when the status of sanitary administration in Great Britain was little if any better than it is in the United States to-day; the example was followed by the Universities of Cambridge and Edinburgh in 1875, and the increasing number and influence of diplomates in Public Health finally led to the recognition of the diploma by an Act of Parliament, which provides that no person shall be appointed medical officer of health in any district unless he is legally qualified to practice medicine, surgery and midwifery; nor in any district of over 50,000 inhabitants unless he is also the holder of a diploma in sanitary science, public health or State medicine. The present effective sanitary administration of that country and the recognized status of its sanitarians, their rewards and honors, are largely due to this degree, voluntarily instituted by a medical college at the instance of the leaders of the medical profession.[1]

There can be little question that similar action by our medical schools will produce similar results. Not less in the interest of the development of our sanitary administration than in the practical interests of the profession—in furnishing an assured vocation for a large number of its members—there should be some provision whereby the membership of State and local boards of health, and especially the executive positions of all health organizations, could be filled by men especially fitted and trained for the work, such qualification to be duly attested by the degree of D. P. H.

"IMPEACHING" A HEALTH COMMISSIONER.

The current chapter in the disgraceful history which the city of Milwaukee is making for itself, in connection with the smallpox epidemic, is the "impeachment" by the City Council of the Commissioner of Health, DR. WALTER KEMPSTER. The JOURNAL has, from time to time, recorded the anti-vaccination and smallpox riots, the lawlessness and bloodshed, which have attended the efforts of the health officers of that city to enforce the public health laws of the State and the municipal sanitary ordinances. The courts have sustained the health authorities in their legal right and duty to enforce vaccination, to remove smallpox patients to isolation hospitals and to erect and maintain such hospitals. These authorities assert that they are powerless to enforce their rights and to discharge their duties because of the hostility of the City Council and have appealed to the State Board of Health for assistance. That body has made an investigation and in its report sustains the Health Department, indorses its action, and recommends to the Governor that military force be employed, if necessary, to enable the Department to cope with the epidemic. GOVERNOR PECK has refused to do this, on the ground that the city has not yet exercised its own authority nor exhausted its own resources. Meanwhile, the disease continues to spread. Less than half the known number of cases are in the isolation hospital, an unknown number are concealed, the deadlock between the City Council and the Department of Health gives no signs of being broken, and a well-informed correspondent of the JOURNAL writes: "The disease has such a start now that I do not look for its speedy termination under any circumstances, and fear that it will only cease to exist after it finds no more material to feed upon."

The attempt to impeach DR. KEMPSTER is based upon charges that undue force was used to remove patients to hospital; that officers of the Department spread contagion by riding in public vehicles; that patients not afflicted with smallpox were taken to the isolation hospital and convalescents discharged while still in a dangerous state; that quarantine was imperfectly maintained and the hospital shamefully mismanaged, etc. Many of the charges are trivial, some notoriously untrue and others susceptible of such explanation as to relieve DR. KEMPSTER of any responsibility for their existence. But even if it were admitted that all the charges were well-founded, that would constitute a sorry defense for the attitude of the City Council of Milwaukee in neglecting to secure first a vigorous enforcement of the existing sanitary ordinances which they are sworn to support, and a proper respect for law and order of which they are supposed to be the guardians.

The investigation of DR. KEMPSTER at the proper time may or may not be justifiable; of that the JOURNAL does not assume to judge. But it is not now the proper time, and never will be, so long as such investigation interferes with or delays the suppression of a loathsome disease whose unrestrained existence and spread menaces other communities and commonwealths.

[1] Dr. Charles E. Paget, in a recent presidential address on "Some Imperfections of Public Health Administration," says: "I believe that the University of Dublin even held its first examinations [for the degree of D. P. H.] in 1871, before the passing of the Act which made the appointment of medical officers of health obligatory in England and Wales." He adds, in the same connection, "Let it, therefore be clearly understood and remembered that this additional impost on medical education was made for the welfare of the country and to the honor of our profession—voluntarily and from high motive, not by legislative decree or in deference to popular demand."—*The Lancet*, Sept. 29, 1894.

SANITATION AT THE COMMUNION SERVICE.

The Bedford Avenue Church (Baptist) of Brooklyn, New York, has followed the example of a church in Rochester, in bringing into use individual cups for the communion service. This step has been under consideration for six months, under the lead of the pastor, DR. GUNNING, who is a graduate in medicine. The cups adopted in this instance have a capacity of one-half an ounce, and the wine that will be used will be an unfermented grape-juice. This new arrangement will for a time stand as the ultra-sanitary plan for this act of church ritual. The most weighty argument that has been used for the furtherance of the new plan has been that there seems to be no good and sufficient reason why cleanly people should drink from one common sacramental chalice, any more than the same people should have a repugnance to making use of one common teaspoon, or one common toothbrush.

It may not be easy to bring proof that any given case of disease has been communicated by means of the churchly chalice, but these two congregations, above referred to, are content to serve as pioneers and to give themselves the benefit of the doubt, as against the possible spread of diphtheria, and the like, by the common drinking vessel.

THE ASSOCIATION TREASURER'S NOTICE.

It is extremely gratifying to observe the unanimity and good business sense shown by many members of the ASSOCIATION in paying prompt attention to the notice of the Treasurer. There are, however, many members still in arrears for the annual subscription due last June.

The JOURNAL, grateful for the cordial and kindly responses already made to DOCTOR NEWMAN'S request, yet hopes that the next month may show all membership arrearages paid in full. To that end we earnestly urge those in arrears to make prompt remittance to the Treasurer, in order that the ASSOCIATION treasury may show a handsome balance on the right side of the ledger, and that the JOURNAL may commence the new year with that strength which always accompanies a solid bank account.

CORRESPONDENCE.

The Dispensary Question.

CLEVELAND, OHIO, NOV. 1, 1894.

To the Editor:—I have noticed that our JOURNAL has from time to time denounced the "dispensary abuse," but, on the other hand, I have noticed the apparent apathy of the profession in regard to this question. I would call your attention to the fact that here in Cleveland we have the profession at large agitated over the question of the dispensary abuse, partly brought about by a trial going on between two homeopathic physicians in regard to this dispensary question—the judges in the case being two trustees of their college

In my own case the trial was before a jury in a justice court. I sued the defendant for services rendered. The defendant came to the college dispensary looking for the surgeon who treated cripples. On being questioned he asserted a willingness to pay. He stated that he had a correspondence with Columbus, Ohio, parties who would correct the club-feet of his boy for $500. He stated that $500 was too much, but that he could pay a reasonable fee. I agreed to do it for a reasonable fee—less than $500. For personal convenience I very commonly have private patients from in and out of town go to the college building, when a plaster-of-Paris dressing is required, but it is not applied in the presence of the class. This is done at the college instead of my office, on account of having plenty of help at the college, and also that it saves my office from being littered with plaster.

In this case I applied plaster to the child's feet several times at the college building. The operation was performed at University Hospital. The treatment was continued at the defendant's home and my office—lasting in all about four months.

The defendant re-assured me over and over that he would pay, and acknowledged indebtedness in the presence of others. Finally, when I tried to collect my fee he denied indebtedness, claiming that I treated his child as a clinical case before the class. My answer to this was that there was no session of the college and therefore there was no class. I sued for $262.50. The defendant had paid on account $5. The jury granted $143 with interest for three years.

In discussing the "dispensary abuse" there is no chance for argument in regard to the deserving poor—they are never turned away from dispensaries to my knowledge. The question is, Is it right for a dispensary to treat the well-to-do? My argument on the subject is as follows:

I hold that the services of dispensaries are maintained solely for the poor. That, in return for the services rendered, the poor patient may be used for clinical teaching. That the wealthy make donations to the institutions on the representation that the money is to be used in this way. That to obtain donations in the aforesaid manner and then to use the funds so obtained partly for the benefit of the well-to-do, is usually called "*obtaining money under false pretenses*," and is punishable by fine and imprisonment.

But we all know that this abuse exists, and what is the cause? As I see it, the incentive is the inherent selfishness of man; it is largely brought about (especially in the great cities of the East) by the men at the top—those in authority. The professor says to himself: "The larger the clinic, and the more assistants I have, the more important is my position. Then, these middle-class patients do not come from my following—I lose no practice by it." It was from the same motive that one of the Vanderbilts was led to say: "The rights of the public be d—d." In this case it would read: "The rights of the profession be d—d."

The dispensary has no rights in the handling of patients, further than the treatment and clinical use of the poor. It has no moral right to enter into competition with the outside practitioner.

But what about the rights of the dispensary physician? He is in active outside practice and has educated himself for that purpose. He is in open competition with all other practitioners and has a moral right to increase his practice by any honorable means, *i.e.*, in this case to take what additional practice the dispensary may accidentally or incidentally bring him. What right has a dispensary to say that, we, as a dispensary acknowledge that we have no right to this well-to-do patient, but we shall not permit you (the dispensary physician) to treat him? What right has a dispensary to discriminate against their dispensary physicians? Certainly the dispensary would admit the right of some

other doctor (who might be physician to some other dispensary) to have the patient as a private case.

I am willing to abide by any reasonable rule of a dispensary as to the treatment of the poor, but will brook no dictation from any such organization as to whom I shall treat among the well-to-do.

Dr. Bishop, the defendant in the trial between the two homeopathic physicians, sent out a card to the physicians of the city, asking the opinion of the profession in regard to the dispensary abuse. He claims to have over one hundred answers, in which they all denounce the abuse, and agree that dispensaries are solely for the poor, with the privilege of using the patient for teaching purposes.

Respectfully, WM. E. WIRT, M.D.

Priority in Craniotomy and Microcephalus.

GRAND RAPIDS, MICH., Nov. 5, 1894.

To the Editor:—I desire to state through the JOURNAL, that craniotomy for microcephalus is as distinctly American as ovariotomy and several other operations instituted in this country for the benefit of humanity. I take issue with Prof. Carl Beck in his paper published in the JOURNAL October 27, and November 3, on two points: 1, in his statement that Lannelongue of Paris, is *the pioneer*, if I understand the meaning of this word aright to be the man who moves in first. This point, however, does not afflict me since in point of time the date of my operation obliged him to place me first upon the list of operators. I reported two cases in the same paper dated 1878, which was widely circulated in several countries and severely commented upon by both the medical and secular press. I have operated altogether five times for mental defects, with no deaths. A perusal of my paper will, I think, convince any one that I took care to make a careful diagnosis and that I was at the time conscious of the causes which produce mental imbecility, that my deductions were rational, and that I gave these cases the same careful attention that I give to any case in general practice, for which reason I demur against being set before the profession as an experimenter and human vivisectionist.

Between the years 1876-78, I read several papers upon affections of the brain before the Montreal Academy of Medicine, which were warmly discussed by such men as Dr. R. P. Howard, Dean of the Medical Faculty of McGill College; Dr. Henry Howard, Superintendent of the Long Point Asylum; Dr. Wm. Osler, of Johns Hopkins, Baltimore; Drs. Hingston, Bass, Boddick, Fenwick, and Dr. Casey Wood, now of Chicago; all eminent men in the profession and severe critics, in the presence of whom it is not reasonable to suppose that I would present a radical departure in any department of medicine, as surgery unsupported by an adequate *rationale*.

Furthermore, I lay claim to the originality of the introduction of veratrum virid and morphia in the treatment of convulsions and puerperal eclampsia, and of pointing out that these symptoms are caused by arterial spasm and anemia of the nerve centers. I tapped the ventricles of the brain at this time, and discovered that sometimes there was no fluid in cases in which I had expected to find an effusion, which led me to the discovery of a distinction between the coma of compression and the coma of irritation, which was published and, as far as I know, has not been noticed by the profession, though the importance of this distinction ought not to allow it to fall into neglect since the latter class of cases are amenable to treatment successfully by medicine, while the former are, for the most part, hopeless, unless we may expect something by surgical interference.

Yours very respectfully,
WILLIAM FULLER, M.D.

Doctor Diet, Doctor Quiet and Doctor Merryman.

CHICAGO, Nov. 2, 1894.

To the Editor:—One of the evening papers of this city, in quoting the well-known sentence at the head of this letter, attributes the saying to Jonathan Swift. Will you kindly state if this is correct, and oblige, yours very truly,

INQUIRER.

ANSWER:—The original is as follows:

"*Si tibi deficiant medici, medici tibi fiant,*
Hæc tria: Mens hilaris, requies, moderata dieta."

This was in the famous "*Flos Medicinæ*" or *Regimen Sanitatis Salerni*, composed in the year 1099 by Johannes de Mediolanus (John of Milan) with the concurrence of the other professors of the celebrated School of Salernum. This book was first translated in English by Paynell in 1579, and later by Dr. Philemon Holland in 1634. Holland's translation of the sentence reads:

"When Physic needs, let these thy doctors bee,
Good dyet, quiet thoughts and heart mirthfull free."

"Mirth," says Burton, 1621 (Anatomy of Melancholy) "is one of the three Salernitan doctors, Dr. Merryman, Dr. Diet, Dr. Quiet, which cure all diseases."

Dean Swift was born in 1667 and died in 1745, and if he ever used the expression, was too profound a scholar not to have used it as a quotation.

A Good Word for the Eucalyptus.

CHICAGO, Nov. 5, 1894.

To the Editor:—There may be some foundation for the popular belief that the cultivation of the eucalyptus tree has a salutary influence in antidoting the poison of malaria, though in your editorial in the issue of the JOURNAL of October 27, you discredit it. Our knowledge of the origin and nature of malaria is very vague. I think, however, that rapidly growing vegetation in some way modifies the effects of the poison and renders it less harmful to the human system. I say the human system, for malaria is not observed to have any injurious effect on animals. Perhaps it is assimilated by vegetables in their growth and incorporated into their organized substance. It is likely that all growing vegetation has the same effect.

I lived for a time on the Sangamon "bottoms," when that part of Illinois was newly settled. This was a plain about two miles wide and extending twenty miles from the mouth of the river toward its source. Its elevation was not enough to prevent portions of it from being overflowed when the river was high. It had an alluvial soil of unsurpassed fertility and consequently it produced an enormous vegetable growth. This was then among the most malarious districts in the United States. Agues and other malarial fevers were annually endemic here, from September until the following April. They would then cease until autumn came again. They were not developed when vegetation was in active growth but would return when this process was at rest, yet before the mature vegetation of summer had begun to decay.

Many cases of ill health having an obscure origin and unknown pathology are attributed to malaria, but typical intermittent malarial disease is now but little known in Illinois. I do not think I have seen six cases of shaking ague in Chicago in a quarter of a century. I could find as many in one family at one time on the Sangamon "bottoms" fifty years ago. I am told by physicians practicing in that vicinity that it is not prevalent there now. The amount of vegetable product in Illinois has increased many-fold since its soil has been brought under cultivation. The native grasses would not produce more than one ton of hay to the acre. The cultivation of grasses and cereals has greatly increased this amount, and this may be the reason that malarial diseases are no longer common in Illinois. If this theory is true, the eucalyptus, being a tree of phenomenally rapid growth, should have some protective influence against this class of diseases.

EPHRAIM INGALS, M.D.
34 Throop Street.

ASSOCIATION NEWS.

Treasurer's Notice.—Members of the ASSOCIATION knowing themselves to be in arrears will please send the amount of their annual subscription to the Treasurer, HENRY P. NEWMAN, M.D., Venetian Building, Chicago, without delay.

The great expense on account of the establishment of the new JOURNAL office, makes it more than ever necessary that our members should be prompt in their response to this notice.

SOCIETY NEWS.

Chicago Gynecological Society.—At the sixteenth annual meeting of the Chicago Gynecological Society, held Oct. 19, 1894, the following officers were elected to serve the ensuing year: Dr. Franklin H. Martin, President; Dr. A. J. Foster, First Vice-President; Dr. J. C. Hoag, Second Vice-President; Dr. H. P. Newman, Secretary, and Dr. T. J. Watkins, editor. The retiring President, Dr. Fernand Henrotin, delivered an interesting annual address after which the Society adjourned for the annual banquet. Drs. J. B. Murphy, Health Commissioner Arthur Reynolds, Alex. H. Ferguson, John B. Hamilton and others were guests of the Society.

New York Medico-Legal Society.—*Psychologic Section.*—There will be a meeting of the Psychologic Section of the Medico-Legal Society at the residence of H. W. Mitchell, M.D., 747 Madison Avenue, at 8 o'clock P.M. sharp, on Monday evening, Nov. 12, 1894. The Chairman, Prof. Elliott Coues, of Smithsonian Institute, will preside.

The program is as follows: Opening Address by Prof. Elliott Coues. Subject: "Psychic Research in its Medico-Legal Aspects."

"Hospitals for the Insane and their Management." By Clark Bell, Esq., reviewing the address of S. Weir Mitchell, M.D., before the Medico-Psychologic Society.

Discussion, limited to five minutes each, by the Superintendent of Hospitals for the Insane; Experts; and Assistant Physicians; including Superintendents Page, Harrington, Quimby and Walter Channing, of Mass.; Rohé and C. K. Clarke, of Md.; C. H. Hughes and C. A. Woodson, of Mo.; Clark Gapen and Frank P. Norbury, of Ill.; Blackford, of Va.; F. C. Hoyt and Gershom H. Hill, of Iowa; A. F. Kilbourne, R. M. Phelps and C. K. Bartlett, of Minn.; John Curwen, G. R. Trowbridge, of Pa.; H. A. Buttolph, of N. J.; W. A. Gorton, of R. I.; J. H. McBride, of Wis; W. B. Fletcher, of Ind.; A. B. Richardson, of Ohio; O. R. Long and C. B. Burr, of Mich.; Jas. T. Steeves, of N. B.; T. J. W. Burgess, of Montreal; E. S. Blanchard, of P. E. Island; R. L. Parsons and W. S. Fleming, of N. Y.; Michael Campbell, of Tenn.; C. P. Bancroft, of N. H.; D. R. Wallace, of Texas, and others.

"Popular Illusions." By J. H. Hyslop, Esq., of Columbia College, New York City.

"The Psychology of a Jury in a Long Trial." By T. D. Crothers, M.D., of Hartford, Conn., Vice-Chairman of Section. Discussion limited to five minutes. Opened by Judge A. S. Dailey.

Report of Committee, by H. W. Mitchell, M.D., Chairman, on Test Experiments in Telepathy and Mind Reading by Miss Maud Lancaster, before the Section.

"Psychologic Experiments and how the Spirits do their Work." By Prof. J. Louis Kellogg, Esq.

Professor Sundeen has been invited to make some experiments.

Report of Executive Committee on new members and other business. Each member of the Section is entitled to bring one guest. Members and others wishing extra admissions will apply to Dr. H. W. Mitchell or the Secretary. Members will please be prompt. Every member of the Society is eligible to membership in this Section on payment of $1.50 annual dues, which entitles the member to the Bulletin free. ELLIOTT COUES, Chairman.

CLARK BELL, Vice-Chairman and Secretary.

The Southern Surgical and Gynecological Association.—The seventh annual meeting of the Southern Surgical and Gynecological Association will be held in Charleston, S. C., Nov. 13, 14 and 15, 1894. Members of the medical profession are cordially invited to attend.

The program is as follows: Memorial Address on Dr. Warren Stone. By A. B. Miles, New Orleans, La.; Operation for Complete Perineal Laceration. By Jos. Price, Philadelphia, Pa.; Gonorrhea in Women. By J. B. S. Holmes, Atlanta, Ga.; Some Cases of Intestinal Obstruction, with Deductions Therefrom. By A. M. Cartledge, Louisville, Ky.; Hernia of the Diaphragm, with Report of a Case. By Floyd W. McRae, Atlanta, Ga.; The Treatment of Sinuses Following Celiotomy. By W. H. Wathen, Louisville, Ky.; The Diagnosis and Treatment of Congenital Cystic Hygroma. By J. A. Goggans, Alexander City, Ala.; Some Complicated Cases of Abdominal Surgery. By J. G. Earnest, Atlanta, Ga.; Early Operation in Appendicitis, with a Case. By J. McF. Gaston, Atlanta, Ga.; Appendicitis. By W. B. Rogers, Memphis, Tenn.; Attention to Women Before and After Labor. By W. G. Bogart, Chattanooga, Tenn.; Plastic Operations for Carcinoma of the Breast. By J. T. Wilson, Sherman, Texas; Gunshot Wound of Spleen, Hemostasis by Deep Suture, Recovery. By L. McLane Tiffany, Baltimore, Md.; Technique of Vesical Drainage. By G. Frank Lydston, Chicago, Ill.; Successful Treatment of a Case of Nævus by Electricity, with Remarks. By William Perrin Nicolson, Atlanta, Ga.; The Use of Electricity in Late Syphilis. By Lewis Wheat, Richmond, Va.; Observations on the Action of Chloroform on the Functions of the Human Brain and Spinal Cord as Witnessed in Extensive Injuries of the Cranium and Brain. By Bedford Brown, Alexandria, Va.; Treatment of Abscess of the Liver. By J. D. S. Davis, Birmingham, Ala.; Puerperal Peritonitis. By V. O. Hardon, Atlanta, Ga.; Treatment of Peritonitis. By Richard Douglas, Nashville, Tenn.; Movable Kidney. By Geo. Ben. Johnston, Richmond, Va.; History of Vaginal Extirpation of the Uterus. By Geo. J. Engelmann, St. Louis, Mo.; The Present Status of Gall-Bladder Surgery. By A. Vander Veer, Albany, N. Y.; Gynecological Surgery away from the Large Cities and Educational Centers. By W. L. Robinson, Danville, Va.; Reminiscences of Dr. J. Marion Sims in Paris. By Edmond Souchon, New Orleans, La.

President's Address. By C. Kollock, Cheraw, S. C.; Transfusion in the Treatment of Acute Hemorrhage. By T. J. Crofford, Memphis, Tenn.; A Case of Vaginal Hysterectomy for Carcinoma of the Uterus, three days after Parturition. By Geo. H. Noble, Atlanta, Ga.; The Simultaneous Appearance of Cancer in the Breast and Uterus. By James Evans, Florence, S. C.; Something about the Final Condition of the Mouths in Gastro-enterostomies with Specimens. By H. Tuholske, St. Louis, Mo.; Puzzling Point in Labor. By Geo. R. Dean, Spartansburg, S. C.; Supra-pubic Cystotomy compared with Perineal Operations. By C. H. Mastin, Mobile, Ala.; Tracheotomy for Foreign Bodies in the Air Passages. By W. F. Westmoreland, Atlanta, Ga.; Ligation in Continuity with Report of Case 1. Ligation of the External and Internal Carotid Arteries and Internal Jugular Vein. Case 2. Ligation of the External Carotid Artery. By Jno. A. Wyeth, New York; The Placenta—When and How Delivered. By J. B. Murfree, Murfreesboro, Tenn.; Report of Cases of Varicocele Treated by the Open Method and Shortening of the Scrotum. By W. E. Parker, New Orleans, La.; Treatment of Cystitis in the Female. By Hunter McGuire, Richmond, Va.; Hydro-pyo-nephrosis—Successful Removal of a Forty-pound Tumor of the Kidney. By Jos. Taber Johnson, Washington, D. C.; The Value of Plastic work in intra-peritoneal Operations. By J. W. Long, Richmond, Va.; Fibroid Tumor of the Uterus, with Suppurating Ovary Discharging per Rectum. By Rufus B. Hall, Cincinnati, Ohio; Technique of Operations on the Pregnant Uterus. By W. D. Haggard, Nashville, Tenn.; The Relation of Uterine and Ovarian Disease to Insanity. By L. S. McMurtry, Louisville, Ky.; Surgery of the Ureters. By Howard A. Kelly, Baltimore, Md.; Ideal Operation for Varicocele. By G. Frank Lydston, Chicago, Ill.; The Value of Coccygeal and Sacral Resection in the Treatment of Congenital Occlusion of the Rectum. By Rudolph Matas, New Orleans, La.; The Surgical Treatment of Spina Bifida, with an Illustrative Case. By H. O. Marcy, Boston, Mass.; Ligation of the Uterine Arteries in the Treatment of Chronic Metritis. By W. E. B. Davis, Birmingham, Ala.

The officers for the ensuing year are as follows: President, Cornelius Kollock, Cheraw; Vice-President, J. B. S. Holmes, Atlanta; Secretary, William Elias B. Davis, Birmingham; Treasurer, Hardin P. Cochrane, Franklin. Council: Lewis S. McMurtry, Louisville; George J. Engelmann, St. Louis; Hunter McGuire, Richmond; Wm. David Haggard, Nashville; Bedford Brown, Alexandria.

PUBLIC HEALTH.

Epidemic Contagious Diseases.—Both typhoid fever and diphtheria have increased in the number of cases and of localities infected in the States enumerated in last week's issue of the JOURNAL. The smallpox situation remains substantially unchanged—the only feature of note being another introduction of the disease in the ill-fated town of Walkerton, Ind. A cable dispatch of the 3d inst., reports Asiatic cholera alarmingly prevalent at Broussa in Asia Minor, causing considerable apprehension in Constantinople, where the disease has also reappeared in the Scutari barracks.

Bovine Tuberculosis.—Considerable activity is being manifested by the public health authorities in some of the Eastern States in renewed attempts to exterminate tuberculosis in cattle. In New York, recently, thirty tuberculous cows belonging to a choice herd were killed at Elmira, but criticism is made that the Commissioners take such action only upon the request of owners—usually of costly cattle for the protection of the remainder—and that no systematic inspection is made of the common dairy herds, which furnish the milk supply and which are generally kept under conditions that favor the development of the disease. In Massachusetts such a systematic inspection has been begun, with the avowed purpose of examining every cow, bull and calf, beginning at Cape Cod and extending westward until the whole State has been covered; the tuberculin test is employed and every animal that shows the characteristic reaction is to be slaughtered forthwith. On the recommendation of its Sanitary Committee the Philadelphia City Board of Health has also adopted the tuberculin test and, after sixty days' notice, any milk producer supplying the city who fails to furnish a clean bill of health for his dairy—based upon the results of this test—will be liable to have his milk supply rejected as suspicious and its sale prohibited.

Purification of Water.—A great deal has been lately written and published concerning permanganate of potash as a sterilizer of water. MM. Chicandard and Schipiloff assert that its use is simple, rapid, inexpensive and efficient. According to these authors all that is necessary is to add enough of the salt to color the water violet, and then get rid of the excess of potash by adding any harmless organic matter, such as powdered oak-bark, cinchona, kola nut, coffee or licorice. By this method they claim an absolutely innocuous water is obtained, much superior to that furnished by boiling or filtering. M. Coreil, Director of the Toulon laboratory, has completed a long series of experiments to determine the correctness of these assertions, and he claims (*Annales d' Hygiène Publique*), that, so far from confirming these optimistic views, in his opinion this method is open to very grave objections, and reliance upon it may lead to serious consequences during epidemics of typhoid fever or Asiatic cholera. Coreil asserts that the permanganate, in the quantity indicated, does not cause a disappearance of the bacteria in polluted water—only a diminution in their number. He insists that the method shall not be substituted for boiling or sterilization by heat during the prevalence of an epidemic.

Catarrh Remedies said to Contain Cocain.—Dr. R. G. Eccles, of Brooklyn, has contributed to the *Druggists' Circular* some observations as to the dangers arising from the nostrums advertised for the cure of catarrh, due to their contained cocain. He remarks that "the sober second thought has been commended by wise people through all time. When the Birney Catarrhal Powder Company took their second thought they deemed it wise to let their patrons know that they were using cocain every time they blew the Catarrhal Powder into their noses, and began to state this fact on their labels. They certainly could not have done a more discreet thing for themselves nor better for their patrons. This writer has certainly no desire to oppose those who with open eyes walk into a medical danger, but he deems it a duty to the public to point out such danger and then allow each person to act as he desires." As to the danger, Dr. Eccles writes: "Persistent use will most likely establish a habit as bad or worse than drunkenness; to become a slave to cocain is something terrible. The writer has seen several such wrecks and they are truly objects of pity."

The Lesson of the Plague.—The *Medical Press and Circular* holds that the dangers from the plague can not be considered as having passed by. The disease is still endemic and fatal in Yun-nan and other parts of southern China, and the free inter-communication that exists throughout the Empire makes it important that China shall bestir herself to apply modern scientific methods, both preventive and curative, to the deadly disease. The Hong Kong outbreak has slain its thousands of Chinamen and a few Europeans. It has enforced itself upon the latter who survive, that the Chinese quarters of the treaty port cities are, under their present conditions a source of constant danger. The communism of disease holds sway, and it must be borne in mind that the sanitation of the native sections can not be neglected any more than the best of the town. The habits of the lower orders of the city-dwelling Chinese are filthy in the extreme, and as a consequence they are constantly keeping alive the germs of the filth-diseases, such as cholera, typhoid fever, dysentery, and the plague. This constitutes a standing menace to the Europeans and Americans who must needs reside in China that may well make the future sanitation of all parts of the treaty ports a subject for international discussion.

Cremation Among the Ancient Greeks.—One of the most interesting communications read at the recent Congress of Orientalists at Geneva was, according to *Le Progrès Médical*, that of M. Georges Perrot on "Incineration and Inhumation during the Homeric Epoch." In spite of Schliemann's opinion it is evident that inhumation was the sole mode of sepulture during the Mycenian period, and it is evident, moreover, that it was never abandoned in Greece, at least among the poorer classes. Cremation could not have been of foreign origin, for it was unknown among the peoples who exerted any influence on Greece. It could only arise from a change in the conception of death. We know that during the primitive epoch, survival in the tomb after death was believed in. Hence the custom of placing familiar objects, such as weapons, vases, etc., along with the body, and of offering sacrifices to nourish the departed. These primitive ideas were modified little by little as experience attested the destruction of the body. Thence arose the idea of Hades, where was sent all that remained of man after death—his image, eidolon, shade. As the destruction of the body was necessary for the entrance of the shade into Hades the rite of incineration was established, not as a substitute for the old custom but as an addition. This is why in the Homeric age the tomb, no longer the perpetual dwelling-place of the dead, was a hillock surmounted by a stela—the last vestige of the former rites. The cult of the dead and the custom of sacrifices on the tombs survived elsewhere. In Continental Greece the usages of the Mycenian period mostly prevailed, as is shown by the latest excavations at Dipylon near Athens. In this cemetery, where inhumation was long practiced, a characteristic feature is the presence of vases surmounting the tomb, sometimes reaching five feet in height. These recall the drains in the Mycenian tombs for conducting the libations of blood, wine and milk, provided by the piety of the survivors for the dead.

Hospital vs. Home Mortality of Smallpox.—One of the principal charges upon which the attempted impeachment of the Health Commissioner of Milwaukee is based, is that of maladministration of the isolation hospital. It is admitted by Dr. Kempster that the hospital is and has been greatly overcrowded—upward of seventy patients at times being thrust into quarters intended for only fifty. In fact, it was the attempt to establish another temporary smallpox hospital, to relieve this overcrowding, which led to much of the existing friction. But the effects of the alleged mal-adminis-

tration are not obvious in the records of the epidemic, and from which the following figures are taken:

Total number cases of smallpox in Milwaukee, January 1 to October 20, inclusive		517
Number treated at hospital	341	
Number treated at home	176	
		517
Recovered at hospital	202	
Died at hospital	78	
Remaining October 20	61	
	341	
Recovered at home	55	
Died at home	59	
Remaining October 20	62	
	176	
		517

These figures show a mortality of 27.8 per cent. among those removed to and treated in hospital, as against a mortality of 51.7 per cent. among those who resisted removal to hospital and were treated at home. The "mal-administration" which resulted in only 78 deaths instead of 144—which would have been the number under the home mortality rate—can not have been very serious.

NECROLOGY.

HENRY VAN BUREN, M.D., of Chicago, October 28, aged 59.—G. E. Garrett, M.D., of Peoria, Ill., October 29.—William P. Overton, M.D., of Cold Spring Harbor, L. I., October 24, aged 74. He was President of the Queens County Medical Society.—John Jackson, M.D., of Whitewater, Wis., October 20, aged 80.—John Wiggins, M.D., of St. Louis, October 28.—J. C. Jones, M.D., of Wymore, Neb., October 30.—E. J. Hutchinson, M.D., formerly of Bloomington, Ill., died at Lakota, S. D., November 2, aged 50.—James M. Justice, M.D., of Logansport, Ind., November 2, aged 77.

MISCELLANY.

Physicians Living in Chicago.—It is estimated that there are about 3,400 physicians within the corporate city limits of Chicago, embracing a territory of 186½ square miles, and a population in round numbers of 1,625,000 inhabitants.

The German Hospital of Brooklyn.—On October 22, the corner-stone of a future great hospital was laid in Brooklyn, New York. The property covers an entire block and the structure is planned to expend a quarter of a million of dollars. The Mayor of the city presided and a vast concourse of devoted Teutonic friends were present and sang chorals and paraded the streets of the German section.

An Eye to Business.—The medical student of the period is quite up to date. Noting the field for surgical practice opened up by the collision of opposing leagues he, too, is organizing himself for the football fray, *pour encourager les autres*. The Columbia College (N. Y.) Medical Department Football Association has arranged for a game with the team of the Long Island College Hospital, has challenged the Bellevue Hospital College men and is trying to arrange games with the Yale freshmen and the Brooklyn Polytechnic. The Rush Medical College (Chicago) eleven recently trounced their opponents by a score of 36 to 4; and the returns from the medical schools are not all in yet.

Episcopal Hospital of Philadelphia.—A bequest of $15,000 will soon be paid this hospital, under the will of the late W. V. Lippincott. The same hospital is also residuary legatee. Numerous other institutions receive sums of five thousand dollars or over. Among these are the Memorial Hospital at Roxborough, Home for Crippled Children, Home for Incurables, St. Christopher's Hospital for Children, Kensington Hospital for Women, School for Feeble-Minded Children, Institution for the Deaf and Dumb, besides two or three other asylums for children. If the estate, when divided, reaches a total larger than these primary bequests, the Pennsylvania Hospital for the Sick and Injured and the Pennsylvania Hospital for the Insane will receive each a gift of $5,000.

Women-Doctors in Turkey.—A late number of the *Revue Bleue* contains an article by C. Chryssafides, in which he argues that the recent imperial irade by which women are allowed to practice medicine in Turkey has political importance of the highest degree. The writer thinks that this concession will meet "a long felt want." We know that Mussulmans are unwilling to allow male physicians to enter the harem; consequently, Moslem women, either through timidity or by order, are forced to resort to female quacks, and only consult skilful practitioners in cases of exceptional gravity. The Sultan's irade will probably change this state of things and assure women-physicians an influential standing in Turkish families—all the more so since Orientals profess great veneration for doctors. Chryssafides has no trouble in proving that at the Ottoman court the doctors of the palace always have been and are at present very influential personages. It follows that not only will doctresses be secure in their practice in Turkey, but they will exercise a great deal of indirect political influence for their respective countries. We may be sure, says the author, that the English and German governments will not neglect this double opportunity very long; and it is not likely, he adds, that the Bible societies will remain inactive either. Russia would seem to have been more astute in this matter; as heretofore noted in the JOURNAL, the government has authorized the foundation of a woman's medical college in St. Petersburg, and the reason now given for this action is that women who desire to enter the profession may not have to go to France or Switzerland, "where they are likely to become imbued with nihilistic principles."

A New Mission Hospital Opened in India.—A new institution largely supported by American means has been built at Miraj, about two hundred miles southeast of Bombay. The opening took place last Fourth of July. The walls were hung with the "Stars and Stripes" side by side with banners of the native State and with the British colors, and the presentation ceremony was participated in by Bala Sahib, the Chief of State. The municipal secretary and numerous other visitors of rank were present, some of whom made addresses. One of these was made by an ex-Kharbhari, or Secretary of the State, Mr. Rao Bahadoor Sitaram Chitray, a man greatly beloved by his own people and a constant friend of the new undertaking. Some of his expressions are very quaint. He began his remarks by referring to the successful treatment of his own case by the medical missionary. He proceeded as follows: "The surgeon in chief of this hospital is a kind-hearted physician and surgeon, and being a missionary, treats rich and poor alike. His skilful treatment of my case is only an example of the kind and careful treatment given to all who come to him. Since the introduction of the good British rule, great and many are the improvements in this land, but none of these are more useful than the charitable medical hospitals established by Government. It is true that we had a number of good native physicians, but they were available only to the rich, and their knowledge of anatomy and physiology was not to be compared with that of a doctor of the present day. The science of surgery was not known to them. At the present time, therefore, the charitable dispensaries and hospitals in India may be called the greatest boon to the people of all ranks everywhere. This hospital is an example of this, as it will give medical aid to thousands in Miraj and the southern Mahratta country. The climate of Miraj being excellent, the sick will always consider this place a sanatorium, as Dr. Wanless understood when he chose this site.

"I have been thanked by the President of the Mission for my interest in its work, but although I have a great personal interest in it, I do not deserve such thanks. These are due only to Bala Sahib, the Chief of Miraj, who is, as we all know, an enlightened prince who takes deep interest in the welfare of his subjects, and has therefore given faithful and kind support to the Mission."

Lay Appreciation of the Doctor's Hard Lot.—In an editorial notice of the addresses delivered at the commencement of the academic year at the various metropolitan medical schools the *Morning Post*, London, October 2, gives some pleasant words appreciative of the hard lot and unremunera-

tive work of the general practitioner which are as applicable in the United States as in the island of Great Britain: "It is a somewhat melancholy thought that men of high ability, of indomitable energy, and of laudable ambition are too often compelled to spend their lives in a constant round of hard work which brings them almost as little pecuniary profit as professional distinction. Such cases are by no means rare, and they do not deserve less sympathy because they are one of the inevitable consequences of the struggle for life under modern conditions. For such men, however, there should be, and doubtless there often is, a very real compensation in the consciousness that the work of the ill-paid general practitioner is neither less honorable nor less useful that that of the most fashionable specialist of the day. It is, indeed, infinitely creditable to the rank and file of the medical profession that they do their work with an amount of zeal and of patience which are matter of common knowledge and universal recognition."

And even the hard lot of the medical student of to-day meets with public appreciation and sympathy: "There are plenty of men yet in practice who can recall the time when the student had, at least before he arrived at the stage of practical work in the wards of the Hospital, very little to do except to study anatomy. Physiology, as a separate branch of study, scarcely existed at all; while the whole enormous modern development of microscope work was absolutely unknown. Naturally the student's life in those days was considerably easier than it is at present, and he was comparatively unvexed by the fear of failure in examinations. We have changed all that now, and, in consequence, the rollicking medical student of tradition has ceased to be a type and figure of the class which he once represented with sufficient accuracy. Is it not, indeed, significant that at one hospital the students should have been warned recently not against idleness, but against excessive study? Mr. Robert Sawyer and Mr. Benjamin Allen might well rub their eyes in profound astonishment if they could hear that—to them—supremely unnecessary admonition."

Abandonment of Fort Supply, Oklahoma.—The post hospital of this military station was closed October 15, last, in accordance with recent orders requiring the abandonment of the post. Camp Supply was established in 1868 as a base of supplies against the hostile Cheyennes and Arapahoes in the Indian Territory. The site selected was a sandy bottom between two creeks, Wolf and Beaver, which by their junction a short distance below, form the north fork of the Canadian River. This, at the time and for several years afterwards, was regarded as a most injudicious selection on account of the malarious surroundings. The country in this vicinity consists of high rolling prairie land with occasional ranges of hills broken by deep ravines in which is a scanty growth of red cedar. Many streams cross the prairie in an eastward course, the bottom lands usually broad sandy tracts whitened with an alkaline efflorescence. The climate was found to be very variable with hot and dry summers and inclement winters, sand storms in the one season and biting northers in the other. Vegetables were scarce, and all attempts to cultivate them proved unsuccessful on account of the poverty of the sandy soil. Game, however, was plentiful until of late years when it became comparatively scarce. At first the officers of the command were quartered in tents and the men in dugouts, about four feet deep, lined with cottonwood logs which rose three feet above the surface and supported a roof of logs, straw and earth. The next year stockaded quarters were built, but as they were roofed and floored with mud they were as leaky, damp, uncomfortable and almost as unhealthy as the dugouts.

In 1873 new buildings were erected, stockaded walls as before, but with shingle roofs, ridge ventilation and pine flooring. The walls and ceilings of the officers' quarters were lined with canvas which, in the language of an official report, "was nicely whitewashed." The partitions between the rooms were lined with canvas which had the very superior advantage of being altered to suit the taste or convenience of the occupants. The official report already cited spoke of the guard house as holding out but few inducements for men to become inmates of it. The hospital was the best building at the post. In the course of years, however, the post became much improved in comfort and sanitary condition. Seven sets of company barracks were erected, each 100 by 22 feet, with wings 68 by 22, and a wide veranda along the front. Bathrooms and lavatories in the wings were supplied with hot and cold water. Officers' quarters were two-story frame buildings with many conveniences. A handsome brick guard house was erected recently. At first the water supply was taken from Wolf Creek, the delivery being by barrels in the water wagon; but afterwards spring water was piped into the post from a ravine two miles distant. A dam was built to collect the water and a wire fence put up to exclude cattle. The receiving reservoir had a capacity of 80,000 gallons and the distributing reservoir held 100,000 gallons. The sewers of the post received none of the surface drainage. The level of the subsoil water fluctuated with that of the creeks. The sewerage system consisted of 4 and 8 inch pipes, with automatic ventilating and flushing tanks, the outfall being into Beaver Creek half a mile distant. With the introduction of the spring water the prevalence of malarial diseases has been much lessened, and of late years there has been but little endemic disease. Measles was at one time introduced by recruits from Columbus Barracks, Ohio; but this was the only epidemic disease recorded in the history of the post.

Abandonment of Fort Bowie, Arizona.—Fort Bowie was reported as abandoned, October 22, last, in accordance with existing orders which were cited in the JOURNAL of October 6. It is doubtful whether any of the officers or men who formed its garrison during the past thirty-five years will have a single regret that it has passed out of existence. It was situated in a wild rocky gorge through which a road or trail of disintegrated granite led east and west through the Chiricahua Mountains to connect Messilla with Tucson. North and south were the high peaks of the range, Dos Cabesas, Castle Dome, Helen's Dome and Bowie's Peak. In the gorge which is known as Apache Pass, 4,780 feet above the sea-level, are the only springs or water supply for many miles along the trail to the east or west; and in the early days of Arizona Territory these springs were the regular camping ground of war parties of the Apaches from the northern mountains in their frequent descents on the farms and mining settlements of Sonora. The withdrawal of the regular troops from Arizona at the outbreak of the Civil War led these Indians to believe that this was due to the steady hostilities which they had kept up against the United States military posts.

When General Carleton marched his column in 1862 from California to join the Union forces in the East and protect the overland route, his troops had to advance across southern Arizona in detachments of two or three companies, each several days behind the other to be sure of having supplies of water in the various springs and holes known to frontiersmen to lie on the line of march. The Apaches considered this warlike demonstration as directed against themselves and concentrated their forces to defend the pass and force the column back on the Arizona Desert by holding the springs. They succeeded in keeping the troops from the water for two days and might have held their position much longer but for the fact that some pieces of a light battery were brought up and opened on them with shell. This demoralized them and they withdrew into the security of the mountains. Artillery fire was a new and alarming experience to them. Our troops suffered much from want of water during the attack; and Dr. Vitridge, an acting assistant surgeon was wounded. Company G, Fifth California Volunteers, was left as a guard to the springs at this important and dangerous part of the road, and its camp on the summit of a knoll overlooking the water supply became afterwards Fort Bowie. Up to 1868 it was merely a camp of shelter tents and dugouts on the slope of the hill, but the building of a permanent fort was then begun and for several years thereafter the quarters were much superior to those of most of the Arizona posts. All the buildings were of adobe or sun-dried bricks; one-storied, with accommodation for one company of infantry and two troops of cavalry. The water was pumped into reservoirs and distributed by gravity; and the waste water and sewage were carried away by a well laid sewerage system.

All the conditions were healthful at this post; but for many years there was danger in leaving its immediate vicinity, the broken granite rocks and precipitous ravines af-

forded so many lurking places for the hostile Indians. A promising young captain of the Thirty-second Infantry was killed a short distance from his quarters. Even the bears sometimes took part in the war against the intrusive white race. An acting assistant surgeon, *en route* along the gorge to join the post, strayed from his escort a few yards up a side path and came unexpectedly on a bear. The doctor escaped with his life, through the coolness and marksmanship of a soldier of the escort, but he received many bruises and two or three ugly gashes in his thighs. No; there are few persons in the military service of the United States who will heave a sigh on account of the abandonment of Fort Bowie.

Urinary Phosphates in Malaria.—Mm. Picci and Bernasconi have published the results of their examination into the "Elimination of Phosphates in the Urine of Malarial Patients." In the first twenty-four hours of infection, phosphoric acid is more considerable than in normal urine.—*L'Union Medicale*, Oct. 23, 1894.

Small Caliber Rifles.—The Military Information Division of the War Department has issued an interesting pamphlet entitled, "Notes on Organization, Armaments and Military Progress in American and European Armies," in which are given an epitome of the more important foreign military organizations, and a somewhat detailed description of the small arms and side arms in use at home and abroad. Full descriptions are given only in the case of the newer or little known arms, although occasionally the older small arms are also described for purposes of comparison. These have an interest for the military medical man in view of the change that will be produced in the character of war wounds and the alterations that will be necessary in field hospital management.

During the past year there has been continued activity in testing, changing, adopting and manufacturing small caliber rifles. The United States Navy has the smallest of these small calibers, 6 millimeters or .236 inch. Holland and Roumania have the Mannlicher rifle with a caliber of 6.5 millimeters or .256 inch. This is the size, also, of the Krag-Jörgensen rifle of Norway, the Parravecino-Carcano of Italy and the Mondragon of Mexico. The modified Krag-Jörgensen rifle now being issued to the troops of the United States has a caliber of 7.62 millimeters or .30 inch, the same as the Mouzin rifle of Russia. The Lee-Metford adopted last year by England is 7.7 millimeters, or .303 inch; the rifle of the German Experimental Committée 7-9 millimeters, or .311 inch; the French Lebel, the Austrian Mannlicher and the Japanese Murata 8 millimeters or .315 inch. Our naval officers are convinced that their caliber, the smallest of any adopted, is superior to anything larger; and they stopped at that fraction only because of the anticipation that a smaller one would involve too many difficulties in the manufacture of barrels. They say that an approach to a practical point blank, man firing standing, of 725 yards will result from the adoption of their new barrel and its ammunition. The Mondragon rifle, called after its inventor, a major of Mexican artillery, is now being made in Switzerland until the National Army Factory at Molino del Rey is equipped for its manufacture. It is regarded as one of the best of the new rifles. It is capable of three kinds of fire: Slow fire of from 15 to 20 shots per minute; repeating fire up to 40 shots per minute and rapid fire which is said to deliver as many as 80 shot per minute. In addition it claims advantages in simplicity of mechanism and facility in working. Since the war in Chile, the greatest energy has been manifested by the South American republics in arming their troops with the small caliber rifles. The Congressionalists won their decisive battles over Balmaceda by the help of the Austrian Mannlicher. A supply of this rifle had been obtained by the presidential government and when the fleet revolted, the revolutionists who went on board took the rifles and issued them to the land forces. These quick firing and wide carrying Mannlichers spread a panic in the ranks of the presidential troops although the latter were the better trained soldiers. The Lee-Metford rifle is now in the hands of all British infantry. The Secretary of State for War, reported in March last in answer to a parliamentary inquiry: "In India there are Lee-Metford rifles for the European troops and in reserve; in the colonies the infantry is armed with them and at home there is an ample supply of arms for the regulars and the militia, and a large reserve in addition."

The effect of the latest small bore projectiles is a matter for the future to decide. Recent experiments (1894) by the medical staff of the German Army, as to the wounds inflicted by the small bore bullet have furnished further proof that, notwithstanding its diminutive size, its effects are highly destructive, owing to its enormous speed of rotation which causes the tissues struck to be torn within a radius of four inches. Up to 660 yards, a bullet striking the head, neck or abdomen means death. From 660 to 1600 yards most serious, and in many cases fatal wounds are certain to be inflicted. Beyond 1,600 yards the injuries caused resemble those inflicted by the round bullets which were in use before 1860.

The United States Ordnance Department is carrying on a series of careful experiments with the Kruka-Hebler tubular bullets, the results of which have not yet been made known. The two causes which influence detrimentally the velocity of bullets are the condensation of the air strata immediately in front and the formation of a vacuum immediately behind the projectile. To obviate these, the tubular bullet was invented which, when made of steel, is said to have an immense range, a flat trajectory and great penetration.

Louisville Notes.

THE CHILDREN'S FREE HOSPITAL.—The first annual report of this most worthy institution was issued in January, 1893. It shows that on Oct. 16, 1890, thirteen public-spirited men and women of this city incorporated themselves as a charitable and benevolent society, under the corporate name of the Children's Free Hospital. Stock was issued, and as soon as $10,000 was subscribed a very suitable building was purchased and refitted, and the first patient admitted for treatment on Jan. 23, 1892. Many times defeat stared the tireless workers in the face, but they kept on, and now have a most admirably conducted hospital, which is doing a grand work, as a result of their labors. The original cost of the completed building was $12,547, and the cost of the running expenses averages about $5,000. The hospital has no regular medical staff; every physician is invited to use the hospital as his assistant in any case, when he requires facilities for the care of the sick, which he can not get in the homes of the patients. The relation of the patient and physician is not altered by the admission to the hospital. Here, as at home, the physician asks whatever assistance he needs. During the year there were treated 155 cases of all kinds. The report for the year 1893 was most encouraging; there were 111 cases treated; of these 88 were discharged, 4 died, and on Jan. 23, 1894, 23 patients remained. The hospital is furnished and paid for, and at present there are ten beds supported by annual subscription. At present, no patients are being received on account of an outbreak of measles which was brought in by one of the children admitted recently. Thus far there have been eleven cases. None of them have been severe and all are convalescing. The hospital has as an adjunct, a splendidly equipped isolating ward in the rear of the place. No contagious diseases are admitted as such, but this ward enables them to handle all cases which may arise.

MORTALITY REPORT.—The mortality report of the city for the week ending November 2, shows a total of thirty-four deaths. Of these, fourteen were male, twenty-six white, twelve married, eleven natives of Louisville, and twenty-three native-born Americans. Pneumonia leads the list with five fatalities. For the month ending November 2 the Health Officer reports a total of 286 deaths, the nnmber of male and female being the same; 218 were white, 78 married, 156 natives of Louisville. Consumption heads the list with forty, old age next with twenty-three, and diphtheria and inanition next with twenty each. There were two homicides and two suicides. This is an unusually heavy death-rate from diph theria and the end is not yet, as the daily report for Novem-

ber 1 showed two children who died from this trouble. The importance of having a contagious disease act is becoming more and more apparent, and it is earnestly to be hoped that those in charge of it will not let it drop, for it is a question of vital importance to many.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—Louisville will send quite a delegation to the annual meeting of the Mississippi Valley Medical Association this month at Hot Springs. The meeting bids fair to be one of the most successful that has ever been held.

ACADEMY OF MEDICINE.—The question of an Academy of Medicine for the city is being agitated again upon a somewhat different basis than the one spoken of during the spring, and much is expected of the committee which has charge of the preliminaries. Such an organization is much desired in Louisville. As it is at present there exist several private societies which meet bi-weekly and monthly, and at which the social feature is one of the chief objects, a quite elaborate collation being served at the beginning or completion of the meeting. These societies are limited as to membership and the profession at large are without any society. The Academy will enable all to take part in the discussions, and it is earnestly hoped that this attempt to perfect an organization will prove successful.

Washington Notes.

MEDICAL SOCIETY OF THE DISTRICT.—The Committee on Legislation was directed to take steps to present to Congress a plan for filtration of the Potomac water, used in the District of Columbia. A committee was also appointed to investigate and report the facts connected with the present outbreak of smallpox.

THE WASHINGTON OBSTETRIC AND GYNECOLOGIC SOCIETY.—The two hundred and sixteenth meeting of the Society was held November 2. Dr. W. P. Carr read a paper entitled "Oöphorectomy for Fibroid Tumors of the Uterus," and reported several cases so treated. Dr. H. D. Fry presented a specimen of sarcoma of uterus, which he had removed, and also gave the history of a case of ectopic gestation in which his diagnosis was confirmed by a successful operation. The interesting specimens, left tube after rupture, were presented. The fetus was lost in the clots removed from the peritoneal cavity. Dr. H. L. E. Johnson gave the history of a case of multiple fibroma of the uterus, complicated by a large unilocular cyst of the right ovary, and presented the specimen. The vermiform appendix and left ovary and tube were also removed. The patient, aged 52, had flooded for thirty-eight years.

The death of Dr. Goodell, of Philadelphia, an honorary member of the Society, was announced and suitable action taken.

THE WOMAN'S CLINIC.—The annual meeting of the Board of Directors of the Woman's Clinic will be held on the 6th inst., for the election of officers.

SMALLPOX.—One death from smallpox. There were seven cases in this city at the closing of this report. All isolated at the smallpox hospital and due to imported infection.

THE SIBLEY MEMORIAL HOSPITAL.—The Attending and Consulting Staff of the hospital will be announced by the Board of Management on the 5th inst. The physicians connected with the institution vaccinated 2,200 patients during the past week. This was in the nature of emergency work for the Health Department of the city.

THE PUBLIC SERVICES.

Regulations Regarding Consular Bills of Health from Certain Ports in Canada and Mexico.

The Treasury Department has issued the following circular:

TREASURY DEPARTMENT, OFFICE OF THE SECRETARY,
WASHINGTON, D.C., Oct. 17, 1894.

To the Officers of the Treasury Department, Consular Officers, and Others concerned:

The following Act passed both Houses of Congress during the last session, and was approved by the President August 18, 1894:

An Act to amend section two of the Act approved February fifteenth, eighteen hundred and ninety-three, entitled "An Act granting additional quarantine powers and imposing additional duties upon the Marine Hospital Service."

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Section two of the Act approved February fifteenth, eighteen hundred and ninety-three, entitled "An Act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service," is hereby amended by adding to the end of said section the following:

"The provisions of this section shall not apply to vessels plyingbetween foreign ports on or near the frontiers of the United States and ports of the United States adjacent thereto; but the Secretary of the Treasury is hereby authorized, when, in his discretion, it is expedient for the preservation of the public health, to establish regulations governing such vessels."

Under the above Act, vessels plying between Canadian ports on the St. Croix River, the St. Lawrence River, the Niagara River, the Detroit River, Lake St. Clair and St. Clair River and the St. Mary's River, and adjacent ports in the United States on the same waters; also Mexican ports on the Rio Grande River and adjacent ports in the United States, are exempt from the provisions of section 2 of the Act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service, approved February 15, 1893, which requires vessels clearing from a foreign port for a port in the United States to obtain from the consular officer a bill of health.

During the prevalence of any of the quarantinable diseases at the foreign port of departure, vessels above referred to are hereby required to obtain from the consular officer of the United States, or from the medical officer of the United States, when such officer has been detailed by the President for this purpose, a bill of health, in duplicate, in the form prescribed by the Secretary of the Treasury, Quarantine Regulations of the United States, 1894. J. G. CARLISLE, Secretary.

Army Changes. Official list of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from Oct. 27, 1894, to NOV. 3, 1894.

Major JOHN V. LAUDERDALE, Surgeon U. S. A., is granted leave of absence for four months, to take effect upon the final abandonment of Ft. Ontario, N. Y.

Major WILLIAM H. GARDNER, Surgeon, so much of the order as assigns him to Ft. Custer, Mont., is revoked.

Capt. ALFRED E. BRADLEY, Asst. Surgeon, so much of the order directing him to report for duty at Ft. Keogh, Mont., is amended as to direct him, upon the abandonment of Ft. Sully, S. D., to report for duty at Ft. Custer, Mont.

Capt. OGDEN RAFFERTY, Asst. Surgeon, so much of the special order as directs him to report to the commanding officer, Presidio of San Francisco, Cal., for duty, is revoked.

Major CLARENCE EWEN, Surgeon, is granted leave of absence for six months, on surgeon's certificate of disability.

Navy Changes. Changes in the Medical Corps of the U. S. Navy for the week ending NOV. 3, 1894.

Asst. Surgeon A. W. DUNBAR, ordered to Naval Laboratory and Department of Instruction.

Asst. Surgeon ARMEN FARENHOLT, detached from Naval Laboratory and Department of Instruction, and ordered to U. S. R. S. "Vermont."

Asst. Surgeon L. W. STONE, detached from U. S. R. S. "Vermont," and placed on waiting orders.

Asst. Surgeon J. S. HOPE, detached from Naval Hospital, Mare Island, Cal., and ordered home.

Surgeon DWIGHT DICKINSON, detached from the U. S. S. "Miantonomoh," and ordered to the U. S. S. "Richmond."

LETTERS RECEIVED.

Anheuser-Busch Brewing Association, St. Louis, Mo.; Antikamnia Chemical Company, St. Louis, Mo.; Axtell, E. R., Denver, Colo.; Allen, C. W., Centreville, Ind.

Broome, Geo. W., St. Louis, Mo.; Bridges, W. O., Omaha, Neb.

Chaillé, S. E., New Orleans, La.; Carter, Geo. W., Marshalltown, Iowa; Christopher, H., St. Joseph, Mo.

Dibrell, J. A., Little Rock, Ark.

Elliot, Llewellyn, Washington, D. C.; Ellis, H. B., Los Angeles, Cal.

Gillette, W. J., Toledo, Ohio.

Hummel, A. L., Philadelphia, Pa.; Holland, James H., Philadelphia, Pa.; Hoover, Thos. J., Columbus, Ohio; Holmes, H. R., Portland, Ore.; Holmes, C. R., Cincinnati, Ohio.

Ingals, Ephraim, Chicago; Ingals, E. Fletcher, Chicago.

Jacobson, N., Syracuse, N. Y.; Jones, H. P., New Orleans, La.

Kennedy, T. C., Shelbyville, Ind.

King, Jas E., Centreville, Ind.

Laplace, E., Philadelphia; Lehn & Fink, New York City; Lam Washington, D. C.; Lanphear, Emory, St. Louis, Mo.

Martin, W. A., San Francisco, Cal.; Moore, J. T., Minneapolis, Minn.; Macrae, Donald, Council Bluffs, Iowa; Moore, C. C., Philadelphia, Pa.; Mattison, J. B., Brooklyn, N. Y.; Mercer Chemical Company, Omaha, Neb.; Mcshane, J. T. Indianapolis, Ind.

Penfield, R. C., Philadelphia, Pa.; Phelps, A. M., New York City; Percy, J. F., Galesburg, Ill.

Reed, R. Harvey, Columbus, Ohio; Rice, C. C., New York City; Ryder, C. C., San Francisco, Cal.; Ristine, C. E., Knoxville, Tenn.

Sauder, Enno, St. Louis, Mo.; Steele, A. J., St. Louis, Mo.; Smith, Q. Cincinnatus, Austin, Texas; Scott, X. C., Cleveland, Ohio.

Tucker, Willis G. Albany, N. Y.; Totman, D. M., Syracuse, N. Y.; Thornton, Wm. M., Charlottesville, Va.; Thayer, Charles P., Boston, Mass.; Taylor, L. H., Wilkes Barre, Pa.; Tuttle, George M., New York City.; Taylor, Lewis H., Wilkesbarrr, Pa.

Vaughn, V. C., Ann Arbor, Mich.

Westerman & Co., New York City; William Wood & Co., New York City; Wyckoff, R. M., Brooklyn, N. Y.; Wright, C. H., Iowa City, Iowa; Wurdemann, H. V., Milwaukee, Wis.; Wathen, Wm. H., Louisville, Ky.; White, J. A., Richmond, Va.; Whitford, Wm., Chicago.

Blank Applications for membership in the ASSOCIATION, at the JOURNAL office.